THE DEVELOPMENT AND PSYCHOMETRIC TESTING OF THE PARENTS DIVORCING CONFLICT MEASUREMENT TOOL

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ABSTRACT

Premela Deck: The Development and Psychometric Testing of the Parents Divorcing Conflict Measurement Tool
(Under the direction of Dr. Kim Strom)

Interparental conflict is commonly acknowledged as a significant risk factor for child dysfunctional adjustment after divorce. Researchers and service providers have dedicated significant attention to identifying high conflict cases and to providing appropriate support and interventions. The majority of instruments used to assess interparental conflict are designed for use after the parents have divorced. However, this focus neglects the population of divorcing parents engaged in entrenched conflict during prolonged divorces. This three-part dissertation serves as the initial steps of a larger research agenda to address the knowledge gap on pre-divorce conflict measurement tools. This dissertation begins the exploratory process of instrument development by first synthesizing the literature on pre-divorce conflict indicators and then creating a validated screening tool for pre-divorce conflict assessment. To that end, Paper 1 includes a systematic review of the relevant pre-divorce conflict literature. The results of Paper 1 informed the development of the Parents Divorcing Conflict Scale (PDCS), a short screening tool for pre-divorce conflict, which was then piloted and reviewed for factorial and construct validity in Paper 2. Paper 3 then confirms the factor structure found in Paper 2 and conducts invariance testing across two subgroups: gender and court appearances. The final validated 8-item instrument offers promising practice, policy, and research implications. By assessing for pre-divorce conflict, clinicians, policymakers, and researchers have an opportunity to intervene

early in the dissolution of the marriage when stress, and often conflict, may be uncommonly high for the family. Differentiating between normal levels of pre-divorce conflict from those levels that may indicate chronic conflict and providing corresponding support during this stage of divorce can allow families to develop or enhance their coping mechanisms to facilitate individual and familial adjustment post-divorce.

For Christopher J. Deck and Gideon R. Deck—you inspire me.

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LIST OF ABBREVIATIONS

CFA	Confirmatory Factor Analysis
CTS2	Revised Conflict Tactics Scale
DCS	Divorce Conflict Scale
EFA	Exploratory Factor Analysis
LOCA	Level of Conflict Assessment of Divorcing or Separating Couples
PAST	Psychological Adjustment to Separation Test
PDCS	Parents Divorcing Conflict Scale
PDPC	Post-Divorce Parental Conflict Scale
PDRCI	Post-Dissolution Relational Communication Index
QCCS	Quality of Coparental Communication Scale
RPCS	Romantic Partner Conflict Scale

INTRODUCTION

THE DEVELOPMENT AND PSYCHOMETRIC TESTING OF THE PARENTS DIVORCING CONFLICT MEASUREMENT TOOL

In the United States, approximately half of all marriages end in divorce and, each year, roughly one million children experience the divorce of their parents (Harvey & Fine, 2015; Wang & Amato, 2000). The number of children affected by divorce before they reach the age of eighteen is significantly larger than this annual figure. Unsurprisingly, given the sheer number of children who experience divorce, a significant amount of research has been conducted regarding the impact of divorce on children. This literature shows that children of divorce may be impacted economically, socially, emotionally, and psychologically resulting in increased risks of a myriad of problems, including substance use, behavior problems, or school and social adjustment issues (Amato, 2001; Arbuthnot et al., 1997; Bacon & McKenzie, 2004; Pedro-Carroll et al., 1999). It appears that it is not the legal separation itself that leads to child maladjustment, but rather the degree to which this separation was traumatic on the child (van der Wal et al., 2018).

Researchers have identified high conflict divorce as a risk factor for traumatic experience for the child and further note that high conflict divorce accounts for much of the psychological and physiological differences between children of divorced parents and children with intact parents (Hald et al., 2019; van der Wal, et al., 2018). The vast majority of research on conflict and divorce is focused on post-divorce interparental conflict and its effect on a child's adjustment to the new family structure. Although the abundance of post-divorce conflict

literature indicates an apparant consensus by professionals of the importance of addressing post-divorce interparental conflict, there remains a distinct lack of consensus regarding defining, assessing, and identifying interparental conflict.

Interparental conflict is a complex and multidimensional construct that may be characterized in several ways, including by type (legal, interpersonal or attitudinal), by level (low to high), and by the degree of openness (overt or covert) (Deutsch & Kline-Pruett, 2009; Goodman et al., 2004). Few studies seem to discuss interparental conflict by stage of divorce. Therefore, the literature lacks consideration of the effect of interparental conflict on the child throughout the arc of a divorce, starting with the initial stage of a divorce: the decision to separate (Ponzetti & Cate, 2008; Salts, 1985).

With the literature's focus on post-divorce conflict, there is an absence of short screening instruments that can specifically measure conflict for parents in the process of divorce (Hald et al., 2019; Saini & Binbaum, 2007). Such an instrument can provide significant value to the field, first, by identifying any conceptual similarities or differences between pre- and post-divorce conflict and, second, by expanding research avenues. Through conceptualizations of pre- and post-divorce conflict, it may be possible to identify pre-divorce cases that have similarities to post-divorce high conflict cases that may pose a risk for family dysfunction. Focusing on pre-divorce cases with a commitment to early identification offers opportunities for early intervention. Similarly, a measurement tool for pre-divorce conflict offers unique research opportunities for early assessment, the development or refinement of pre-divorce-specific interventions, or the creation of longitudinal studies throughout the divorce process, including pre- and post- divorce.

Impact of Assessing Conflict

Correctly assessing the level of conflict by considering varying types and manifestations of conflict may be instrumental in intervention research for clinicians, legal professionals, and policymakers. Clinically, correctly assessing and identifying interparental conflict can facilitate appropriate care and treatment needed to reduce the psychological and physiological effects of divorce on parents and children (Amato, 1993). While the minority of cases are considered high conflict for legal professionals, they require 90% of family court resources, which can delay resolution and burden the court system (Neff & Cooper, 2004; Smyth & Moloney, 2017). For policymakers, high conflict divorces may result in an overuse of social welfare services as parents may make allegations of child abuse or neglect against one another in an effort to better position themselves in litigation (Saini & Binbaum, 2007; Scafadi, 2008). With assessment of the level of conflict and early identification of these cases, policies may also be implemented that address the proper services, timing of these services, and dosage of these services.

Theoretical Perspective

Much of the research in the area of divorce focuses on families and children's ability to adjust in the aftermath of divorce (Gumina, 2009; Wallerstein et al., 2000). In considering the adjustment to divorce, the research draws heavily on stress and coping theories, with a family's or individual's ability to adjust successfully depending on their ability to cope with a stressful event (Wang & Amato, 2000). To name a few, divorce adjustment has been considered through a risk and resilience perspective (van der Wal, Finkenauer, & Visser, 2018); divorce-stress-adjustment perspective (Amato, 2000); and family stress and coping theory (Wang & Amato, 2000). Typically, it is assumed that the divorce brings about significant economic, social, emotional, and even physical stressors to the family as married partners separate their household

(Wang & Amato, 2000). This supports the notion that the divorce itself is not the cause of maladjustment, but the contextual factors surrounding the divorce, such as conflict, employment, or loss of friendships, that create cumulative stressors affecting an individual's ability to cope.

It follows that when these stress and coping theories are considered through a stages of divorce perspective, it is quite possible that many of these stressors exist during the marriage and may become exacerbated by the process of divorce. Further, new stressors are added to the dynamic as families face new economic and social realities by dividing their resources. During this pre-divorce stage, when a couple knows that a legal divorce is imminent and they begin to disentangle their lives, stressors may actually be acute, particularly as couples are likely overwhelmed with emotion and are considering explaining the decision to divorce to their children and social networks (Gumina, 2009). How a couple or family copes with these stressors may be indicative of how they will cope with familial stressors post-divorce. Assessing conflict at this pre-divorce stage may be informative of the family's ability to successfully adjust to divorce. It may also be informative of families that need assistance in developing coping mechanisms immediately to support the family throughout the dissolution of the marriage and post-divorce restructuring. Researchers need to address the pre-divorce period further as it is the initial transition period for divorcing families (Gumina, 2009). This dissertation serves as the initial steps to address this knowledge gap by synthesizing the literature on pre-divorce interparental conflict, identifying predicators of pre-divorce conflict, and creating a short screening tool for assessment of pre-divorce conflict.

Organization of the Dissertation and the Larger Research Agenda

This introduction provides the rationale for the research studies that follow. The three papers in the dissertation are prepared as individual manuscripts around a central theme of pre-

divorce interparental conflict. There is some overlap in the content of the introductions of the three papers; however, each paper has its unique methods, design, sample, measures, and analysis. These papers offer the initial steps in a larger research agenda of evidence building towards a pragmatic, reliable, and valid pre-divorce conflict measurement tool.

Paper 1 presents findings from a systematic review of factors related to pre-divorce interparental conflict and the challenges presented by defining and identifying high conflict cases. The results of Paper 1 informed Paper 2 and the development of the Parents Divorcing Conflict Scale (PDCS), a short screening tool for pre-divorce conflict, which was then piloted and reviewed for factorial and construct validity through an exploratory factor analysis (EFA) presented in Paper 2. Paper 3 then conducts a confirmatory factor analysis to confirm the factor structure found in the EFA and subsequently conducts invariance testing to determine the instrument's function across two separate subgroups: gender and frequency of court involvement.

This dissertation concludes with a combined discussion section that synthesizes and integrates findings from each of the three papers. The three papers are cohesive and complementary in that together they begin to address significant gaps in our understanding of interparental conflict during the under-researched pre-divorce stage of divorce. Although this dissertation concludes with a series of suggestions for future research, this dissertation provides exploratory information that will guide social work practice, policy and future research for one of the most prevalent situations facing Americans today: divorce.

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PAPER I

IDENTIFYING HIGH CONFLICT DIVORCING PARENTS: A SYSTEMATIC REVIEW OF THE LITERATURE

Abstract

Objective: Interparental conflict is a primary moderator accounting for psychological and physiological differences between children of divorced parents and children with intact parents. This study provides a systematic review of the social science literature on the factors that contribute to conflict in divorcing parents and ways to distinguish high conflict cases of divorcing parents. **Methods:** Peer-reviewed articles (n=11) were systematically selected using rigorous methods, including database searches with the search string conflict AND divorc*. Articles were extracted to identify themes of high conflict and identifiers of varying levels of conflict. **Results:** There is no consistent definition of high conflict in pre-divorce parents, and recent articles offer new conceptualizations of this construct. All studies that met inclusion criteria for the review identified at least one of five themes of pre-divorce conflict: conflict resolution/communication, social network, parent characteristics, satisfaction with agreements, and pervasive mistrust. **Conclusions:** The findings have unique practice, policy, and research implications as the field continues to address interparental conflict. First, this study finds the definition of "high conflict" to be evolving with recent publications producing different conceptualizations of the term. Secondly, this study provides the first attempt at identifying themes of pre-divorce conflict. Further research on the similarities and differences of pre- and post-divorce conflict predicators is warranted.

Keywords: High conflict divorce; high conflict parents; high conflict separation; systematic review

Introduction

Poor psychological and physiological outcomes for children of divorced parents compared to children of married parents are often due to the presence of interparental conflict (Hald et al., 2019). Children from traumatic divorces often have long-lasting effects, particularly in terms of their overall well-being and ability to maintain functional social relationships (van der Wal et al., 2018; Wolfinger, 2005). Concerningly, research suggests approximately one-third to one-fourth of all divorces in the United States result in high levels of conflict (Maccoby & Mnookin, 1992; Visser et al., 2017) and this rate seems consistent with other countries with the Netherlands, for example, reporting nearly 20% of divorce cases being high-conflict (van der Wal et al., 2019).

Despite the attention to interparental conflict and the knowledge of the negative impact of conflict on children, the literature still lacks a clear definition and conceptual model for identifying high conflict divorce cases (Polak & Saini, 2018). Instead, "high conflict" seems to be an ambiguous umbrella term used to describe divorce cases that evolve in a manner inconsistent with the majority of divorce cases. For the typical divorce case, interparental conflict is normative and expected during the divorce process (Birnbaum & Bala, 2010). This expected conflict usually subsides within one to two years from separation as the family successfully adjusts to a post-divorce structure. (Smyth & Moloney, 2019; Buchanan & Heiges, 2001; Johnston, 1994). However, for the atypical divorce case, this conflict may be high as evidenced by prolonged litigation, physical or psychologicl abuse, significant disruption in familial relationships (e.g. parental alienation), or post-divorce maladjustment (Birnbaum & Bala, 2010).

Given the many reasons for why a case may be considered high-conflict, there is difficulty in creatinig specific criteria that equates a case to being "high conflict." As a result, many cases may be labeled "high conflict" retrospectively as children exhibit poor outcomes often associated with high-conflict divorce, such as behavioral issues, poor academic performance, or mental health concerns (Polak & Saini, 2018). This retrospective labeling may also explain the literature's focus on post-divorce rather than pre-divorce interparental conflicit. A clear definition of high conflict divorce and predictors of high conflict during the divorce process will facilitate increased research opportunities that may ultimately lead to early recognition and intervention of these cases.

However, failing to address pre-divorce conflict and differentiate it from post-divorce conflict may contribute to the difficulty in defining and identifying "high conflict" cases. As discussed, defining high conflict for divorce cases requires an acknowledgment of the stage of divorce for the family as certain levels of conflict are tolerated and expected during the divorce process, or the pre-divorce stage. Comparitively, ongoing conflict in cases where divorce judgment entered years previously, for example, but the family remains in Court, may be considered pathological and deserving of the term "high conflict" (Ponzetti & Cate, 2008; Johnston, 1994). Recognizing divorce is not a single event in time (namely, the receipt of a divorce judgment), but instead a process of social, emotional, and legal separation, an understanding of interparental conflict at various stages throughout this process may better equip practitioners to interact and intervene with these families (Ponzetti & Cate, 2008). Acknowledging that pre-divorce conflict may be high as a result of circumstances (i.e. the initial separation) rather than an entrenched, ongoing conflict with the propensity for increased risk of

child maladjustment is critical in furthering the field's conceptualization of "high conflicit" cases.

Stages of Divorce

Research on divorce relies heavily on theories including family stress and coping theory, general stress theory, and risk and resiliency perspectives (Booth & Amato, 2001; Ponzetti & Cate, 2008; Salts, 1985). With this stress perspective, marital dissolution is seen as a process that begins with parents intact and ends after a legal divorce decree or judgment (Booth & Amato, 2001). Researchers have conceptualized stages during this process of divorce in various ways (Ponzetti & Cate, 2008; Salts, 1985). Divorce stage theory holds that there are three stages to divorce including pre-divorce decision making, divorce restructuring stage, and post-divorce recovery stage (Salts, 1985). The first two stages occur pre-divorce, meaning before the legal divorce decree. Specific to the pre-divorce stage, Ponzetti and Cate (2008) describe four sequential time points in the process of marital dissolution, including recognition of marital dissatisfaction, serious discussion of the dissatisfaction, action to secure a legal dissolution of the marriage, and acceptance that the marriage will end.

For pre-divorce parents, there are unique stressors that may affect the degree of conflict. Immediately following the decision to separate, parents are faced with a number of stressful changes, including reorganization in income and housing, their role within the family, loss of a spouse and extended family members, and the ultimate loss of a partnership (Amato, 2005; Cohen & Finzi-Dottan, 2012; Johnston, 1994). Despite these unique stressors, there is little research pertaining to the predictors of conflict for parents in the initial stages of divorce (Cohen & Finzi-Dottan, 2012; Saini & Birnbaum, 2007). Although there remains a scarcity of research that focuses on pre-divorce conflict, post-divorce conflict has received considerable attention by

researchers and predominantly focuses on its relation to child adjustment (Ponzetti & Cate, 2008). Further, there is considerable research on factors that contribute to prolonged post-divorce conflict, identifying sociodemographic features (Amato, 2000; Benjamin & Irving, 2001), satisfaction with agreements pertaining to finances and custody (Arditti & Kelly, 1994; Bonach, 2005), and social network support (Arditti & Kelly, 1994).

These two stages, pre- and post-divorce, have different social, emotional, and legal implications, and may have different factors that contribute to interparental conflict. Accepting that divorce is not a single event, but instead a process, it makes sense to distinguish between 1) the pre-divorce transitional and restructuring phase of divorce and 2) the post-divorce acceptance and recovery stage. Ultimately, a distinction between interparental conflict pre- and post- divorce may be necessary to determine whether the conflict is normal or pathological for that specific stage of the divorce process, and finally, whether intervention is needed to facilitate successful familial adjustment (Cohen & Finzi-Dottan, 2012; Finzi-Dottan & Cohen, 2014; Johnston, 1994).

Current Study

The gap in our understanding of defining and recognizing high conflict pre-divorce parents served as the primary rationale for this study. The literature indicates that prolonged interparental conflict correlates to child maladjustment post-divorce. Undetermined is what, if any, contributing factors prior to the legal termination of the marriage result in prolonged high conflict. The purpose of this study was to provide a systematic literature review of the social science literature to determine the factors that contribute to high conflict in divorcing parents. The review was guided by the following questions: (a) What factors distinguish high levels of interparental conflict from normative conflict for divorcing parents? and (b) What factors predict

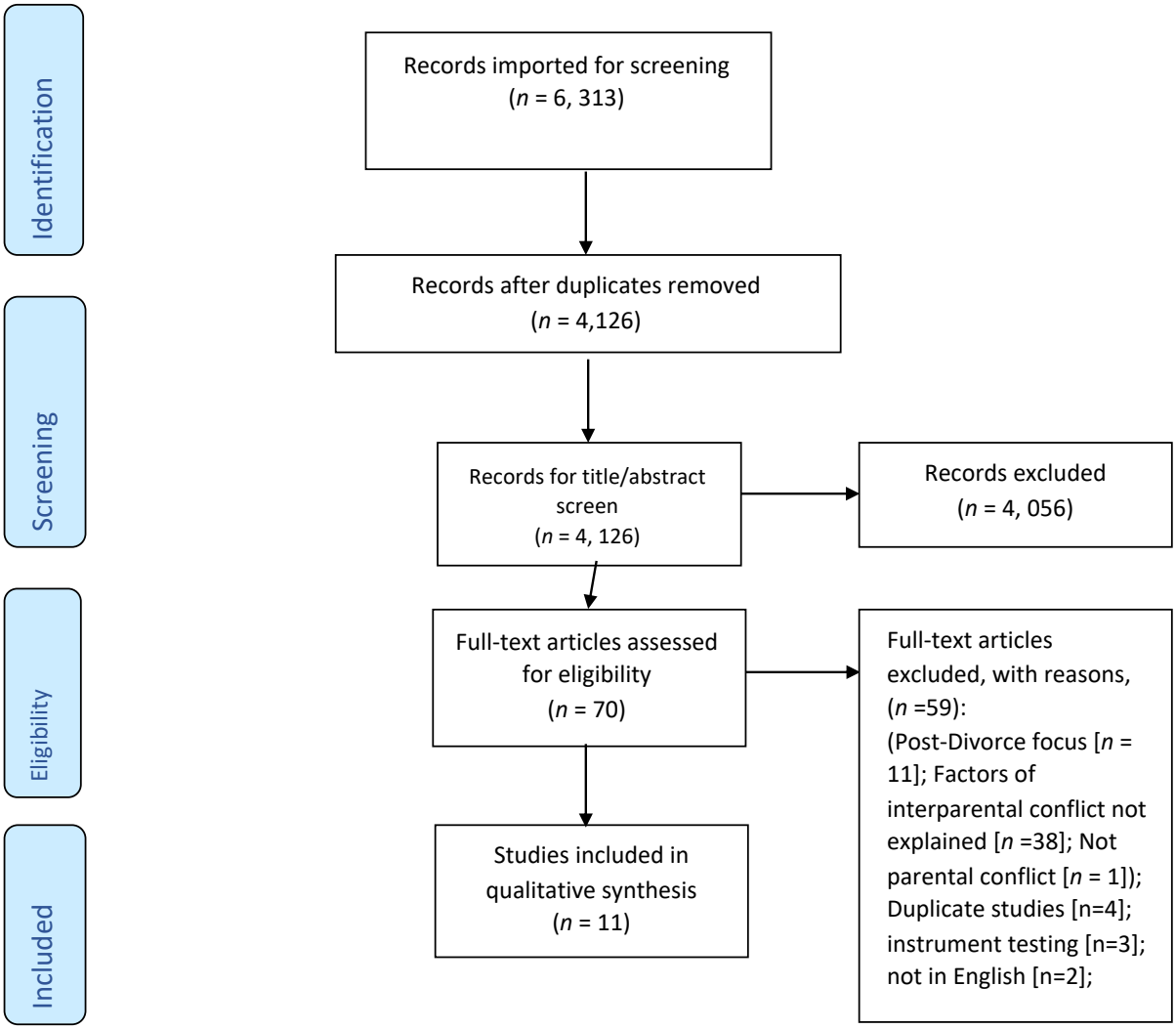
or contribute to pre-divorce conflict? This review was specifically looking to identify social or mental health factors that influence high conflict and pre-divorce conflict.

Methods

This review was developed using PRISMA-P protocols for systematic reviews (Moher et al., 2015). Figure 1 contains a PRISMA flow diagram depicting the various steps in this study's review process. The main goal of the review was to identify factors of interparental conflict for divorcing parents. Following the practices outlined by Litell, Corcoran, and Pillai (2008), the following three methods were used to identify relevant conflict measurement tools: (a) database searches of peer-reviewed literature, (b) hand searches of relevant journals, and (c) reference harvesting. The electronic databases systematically searched were Social Work Abstracts, PsychInfo, and Academic Search Premier. These searches used the following search string: conflict AND divorc*.

After removing duplicates, this search yielded 4,126 articles for a title and abstract screen, of which 78 were advanced to a full-text screen, after agreement by two reviewers. Conflicts were resolved by a third reviewer. Articles were included in the review based on predetermined criteria: (a) specific to pre-divorce conflict, (b) printed in English, (c) focused on defining or describing conflict, and (d) could be either theoretical or empirical. Articles were excluded for (a) testing instruments to measure conflict *(n=3)*, (b) interparental conflict was a dependent variable in an article otherwise focused on a related topic (e.g., child outcomes, categories of interventions, program evaluations) *(n=38)*, (c) the type of conflict discussed is not in relation to romantic relationships or divorce *(n=1)*, (d) not in English *(n=2)*, duplicate studies *(n=4)*, and post-divorce focus (n=11). Articles were not excluded based on publication date. Ultimately, there were 11 articles included in this review.

Figure 1. PRISMA flow diagram



Next, data were systematically extracted from the 11 articles included in the review using an extraction spreadsheet developed and piloted for this study. The spreadsheet captured areas relevant to the research questions guiding this review, including study design, theories and models, definitions of conflict, predictors of pre-divorce conflict, study objectives and research questions, relevant measures, as well as implications, strengths, and limitations.

From the extraction spreadsheets, predictors of pre-divorce conflict were identified through thematic analysis (Thomas & Harden, 2008). Textual summaries pertaining to predictors of pre-divorce conflict were created for each article. From these summaries, emerging themes were identified and compared to create a final codebook of five themes. Each article was then coded for the presence of these themes (Thomas & Harden, 2008).

Results

Examination on interparental conflict for divorcing parents can be gleaned from social science literature and clinical literature, which is reflective in the range of journals publishing this research. These studies were found in nine journals: *The American Journal of Family Therapy; Journal of Child Custody; Journal of Social and Personal Relationships; Journal of Child and Family Studies; Children and Divorce; Journal of Divorce & Marriage; Journal of Divorce; UMI Dissertation Publishing; Australian and New Zealand Journal of Family Therapy;* and *Family Court Review*. All of the articles (n=11) were published between 1994 and 2019. Of the articles, six were empirical and five were conceptual. Table 1.1 provides key information for each of the reviewed articles.

The empirical articles included in this review are a mixed-methods study, a qualitative study, and four quantitative studies. One of the four quantitative studies was a dissertation. The range of predictors identified and tested in these studies is indicative of the multifaceted nature of high conflict pre-divorce and the ongoing research on conceptualizing

high conflict pre-divorce. Table 1.2 provides study characteristics of the empirical articles identified in this review.

Table 1.1
Summary of Included Articles

Author (Year)	Journal	Type of Article	Theoretical Framework	Factors of Conflict Discussed	Classification System Offered
Anderson et al (2010)	The American Journal of Family Therapy	Conceptual	N/a	Pervasiveness, Defensiveness, Aggression, Escalation, Negative attributes and dualistic thinking, Strong negative Affect, emotional Reactivity, Lack of Safety, Mutual Distrust, Triangulation	1) Pervasive Negative Exchanges 2) Hostile, Insecure Emotional Environment
Bergman & Rejmer (2017)	Journal of Child Custody	Empirical	Conflict of Values; Conflict of Interest; Life Trajectory	Time with the child, communication, finances, child's residence, child care, cooperation, violence, addiction, child's wishes, mental or physical illness, access sabotage, threat/risk of taking child abroad, sexual assault of child	1) Conflict of Values 2) Conflict of Interest
Cohen & Finzi-Dottan (2012)	Journal of Social and Personal Relationships	Empirical	Adaptation Processes (Cramer, 1998)	Defense mechanisms, communication, negotiation	N/A

Finzi-Dottan & Cohen (2014)	Journal of Child and Family Studies	Empirical	N/A	Communication and Cooperation	N/A
Johnston (1994)	Children and Divorce	Conceptual	N/A	Individual, interactional, External factors; nature of separation, vulnerability, legal conflict, hostility, distrust, and IPV, child factors.	1) Domain dimension 2) Tactics dimension 3) Attitudinal dimension
Malcore et al. (2009)	Journal of Divorce & Remarriage	Empirical	N/A	Perceived relationship quality; level of conflict; communication; issues with children; continued court involvement	N/A
Polak & Saini (2018)	Journal of Divorce & Remarriage	Systematic Review	Ecological Transactional Approach	Ontogenetic, microsystem, exosystem, and macrosystem factors	1) Ontogenetic (individual) 2) Microsystem (family) 3) Exosystem (community) 4) Macrosystem (culture)
Ponzetti & Cate (2008)	Journal of Divorce	Empirical	N/A	Conflict, love, maintenance, ambivalence, trust	N/A
Seirup (2014)	UMI Dissertation Publishing	Dissertation	N/A	Contentiousness, Conflict, Personality	N/A
Smyth & Moloney (2019)	Australian and New Zealand Journal of	Conceptual	N/A	Family law issues; ideological beliefs, attitudes, and values; Family violence & abuse; Mental Health; Substance, and	1) Circumstantial Conflict 2) Entrenched or enduring conflict

	Family Therapy			alcohol abuse; other addictive behaviors.		
Smyth & Moloney (2017)	Family Court Review	Conceptual	N/A	Reactive and entrenched hatred	N/A	

Table 1.2

Characteristics of Empirical Articles

	Sample		**Research Design**				
Author (Year)	***N***	**Characteristics**	**Design**	**Method**	**Instruments Used**	**Predictors Assessed**	**Findings**
Bergman & Rejmer (2017)	33	None provided	Qualitative Cross-sectional	Summons applications, statements of defense from parents, rapid information inquiries and custody investigations	N/A	Parental Disputes	More mothers than fathers requested sole custody. Majority of cases involved children under 9 years old. Majority of cases were a conflict of values.
Cohen & Finzi-Dottan (2012)	71	Mean age 41.51 for men and 37.53 for women; married average of 11.22 years; average 2.35 children; 38% men	Quantitative Cross-sectional	Hierarchical linear modeling analyses on questionnaires to Israeli divorcing couples	Relationship between Former Spouses Scale; Conflict Tactics Scale; Defense Style Questionnaire	Coparenting via negotiation and defense mechanisms	Conscious use of negotiation and unconscious use of mature defense mechanisms were associated with better co-parenting.

		and women college degree; 46.45% of men and women "average" economic situation.			; Life Orientation Test-Revised; Perceived Social Support and Perceived Social Undermining scale; Temperament survey for Children and Parental Ratings.		
Finzi-Dottan & Cohen (2014)	207	123 women and 94 men; Mean age 39.8; Mean length of marriage 10.8; mean number of children 2.35; 33% college degree; 49% average economic situation.	Quantitative Cross-Sectional	Two stepwise hierarchical regressions on questionnaires to divorcing Israeli parents	N/A	Coparenting	Negotiation as a successful co-parenting technique. Negotiation and gender contributed to communication and cooperation.
Malcore et al., (2009)	280	147 women and 133 men; mean length of marriage 9.53 years; average number of children 1.72	Quantitative Cross-Sectional Archival Data	Multiple regression analyses using survey results administered to high conflict parent class	N/A	Perceived relationship quality; level of conflict; communication; issues with children; continued	Parents' ability to agree, the inclusion of children in the parental conflict, and parental communication were significant predictors of high conflict

						court involvement	
Ponzetti & Cate (2008)	107	57 men and 50 women; mean age of 36.7; average length of marriage 10.2 years	Mixed Methods Cross-sectional	2 hour-Interviews using retrospective interview technique and questionnaires; Regression analysis	Dyadic Trust Scale (Larzelere & Huston (1980); Braiker & Kelley (1979)	Conflict, love, maintenance, ambivalence, trust	As individuals move toward legal termination of their marriage, the level of conflict changes. Levels of conflict peaked during discussion phase. Dyadic trust, ambivalence, and maintenance were significant predictors of conflict.
Seirup (2014)	125	72 Women and 53 men; Average age 42.06; Average length of marriage 10.93; 103 with children and 22 reported not having children.	Dissertation Quantitative Cross-sectional	Hierarchical multiple regression	NEO personality Test; Revised Conflict Tactics Scales	Contentiousness, Conflict, Personality	Best predictor of level of conflict was the participant's report that their partner's personality was "extremely different" from their own. Personality prototypes were not significantly correlated with the level of conflict.

Key Findings

Aim 1: Distinguishing "High conflict" in pre-divorce cases

Among the articles included in this study, there was wide variability in the definition of "high conflict." This finding is consistent with comprehensive reviews of the divorce research literature conducted by Anderson et al. (2010), Polak and Saini (2018), and Stewart (2001) who noted that the lack of definitional clarity contributes to the difficulty in creating successful interventions. The lack of definition may contribute to the finding that many (n=5) of the articles included in this study offered a new categorization system to conceptualize and define high conflict. Notably, of these five articles, three were published recently (between 2017-2019), indicating ongoing dissatisfaction with the existing conceptualizations of "high conflict."

First, the seminal article by Johnston (1994) elucidates three dimensions in categorizing conflict: the domain dimension, the tactics dimension, and the attitudinal dimension. The domain dimension includes disagreements over specific divorce-related issues, such as custody, financial support, and property division. The tactics dimension refers to how a couple resolves disputes, for example, through reasoning, avoidance, or aggression. The third dimension, attitudinal, refers to the negative emotions felt or expressed between the parties.

Next, Anderson et al. (2010) state that couples with high conflict have distinct attributes that fall into one of two categories: "Pervasive Negative Exchanges" and "Hostile, Insecure Emotional Environment." First, "Pervasive Negative Exchanges" focuses on interactions between the couple (exchanges). The authors state that these exchanges are dominated by conflict and offer "pervasive" to describe behavior between the couples that exhibit defensiveness, aggression, escalation, and/or negative attributions and dualistic thinking

consistently throughout their exchanges. Next, “Hostile, Insecure Emotional Environment” addresses the strong negative affect, emotional reactivity, lack of safety, mutual distrust, and triangulation of others (often children) resulting from the consistent pervasive negative exchanges.

In creating their categorization system, Bergman and Rejmer (2017) note that not all conflicts lead to court disputes and sought to understand why some conflicts were more difficult to settle than others. They offer two categories, “conflict of interest” and “conflict of values,” and further state that some conflicts may have elements of both categories. Conflicts of values represent a difference of opinion, such as how to raise a child. Conflicts of interest involve a scarce resource, for example, time with a child. In their study, the authors found that most conflicts *(n*=31/33*)* were conflicts of values.

Polak and Saini (2018) conceptualize high conflict disputes based on an ecological transactional framework. In their systematic review, the authors concluded that various systems are necessary to identify and understand conflict within families. The authors suggest considering risk factors and indicators for high conflict within ontogenetic (individual), microsystem (family), exosystem (community), and macrosystem (culture) categorizations. Their review states that conflict is a complex construct that sits in several systems, accounting for the observed definitional difficulties.

Finally, Smyth and Moloney (2019) recently conceptualized a two-category definition for high conflict involving “circumstantial conflict” and “entrenched or enduring conflict.” The authors state that pathological hatred may account for why some couples continue their fighting for years after their divorce. Circumstantial conflict, or reactive hatred, is time-limited, for example, to the decision to separate. However, entrenched or enduring conflict is an enduring

negative attachment that may be fueled by extreme differences in personality and dysfunctional interpersonal dynamics.

Although these five conceptualizations of conflict in divorce suggest an ongoing dispute on how best to define and recognize high conflict pre-divorce cases, these conceptualizations have some significant overlapping themes. For example, all of the conceptualizations consider conflictual communications between the parents as at least one component of high conflict. In fact, Anderson et al. (2010) solely focus on verbal and non-verbal communication, underscoring the import of negative communication patterns to predict high conflict in divorce. Secondly, four of the five studies acknowledge the divorce process as a contributor to heightened conflict, indicating some type of situational conflict (Johnston, 1994; Bergman & Rejmer, 2017; Polak & Saini, 2018; Smyth & Moloney, 2019). Essentially, these four articles comment that the adversarial nature of divorce and the court system in which the conflict sits, particularly around the division of resources, can influence parents' conflict. The consensus from these articles pertaining to negative communications and the divorce process's influence supports the further study of interparental conflict specific to the pre-divorce stage.

Aim 2: Predictors of Pre-divorce conflict

As summarized in Table 1, the articles included in this review focus on a number of predictors for high conflict pre-divorce. The relevant predictor data from these articles were extracted through thematic analysis, and the predictors have been arranged in the following five themes: Conflict Resolution/Communication, Social Network, Satisfaction with Agreements, Parent Characteristics, and Pervasive Mistrust.

Conflict Resolution/Communication. Conflict resolution and communication are grouped in one theme to capture the idea that their communication practices impact a couple's

ability to resolve conflict. For example, a couple that communicates well may engage in calm reasoning to resolve their dispute (Johnston, 1994). Cohen and Finzi-Dottan (2012) further found in their study that negotiation as a conflict tactic contributed to successful co-parenting during the divorce process. For high conflict couples, Anderson et al. (2010) describe in their conceptualization of pervasive negative exchanges that conflict characterizes the couple's communication in a dominant and pervasive way that persists and escalates across time, evidencing a lack of resolution. High conflict couples may use aggressive communication practices that focus on person-focused attacks rather than issue-focused conflict resolution discussion (Anderson et al., 2010). Poor communication was also found to result in cooperation difficulties where one parent may be unable to contact the other to make decisions on behalf of their child, which may result in a parent filing for sole custody of a child (Bergman & Rejmer, 2017). This finding is consistent with the literature noting that cooperative communication is linked to greater paternal involvement after the divorce (Cohen & Finzi-Dottan, 2012).

Social Network. In their ecological transactional framework, Polak and Saini (2018), discuss the exosystem, or the community, as a critical subsystem in understanding conflict. They note that a parent's perceived disapproval of a former spouse from their network is significantly related to more co-parenting conflicts. This network is further discussed as including family, friends, new significant others, and even professionals, including mental health and legal professionals, who may "cheerlead" and support a parent's position. Finzi-Dottan and Cohen (2012) also note that family may also become aligned with their relatives in a way that might interfere with the interparental relationship by bolstering one parent's perspective rather than encouraging a second perspective. Anderson et al. (2010) describe this phenomenon as triangulation, when a third person is brought into the relationship, perhaps through venting or

gossip. Unfortunately, Anderson et al. (2010) note that often children are the target of the triangulation, which exposes them to a parent's emotional distress or anger. Nonetheless, a strong social support network may be crucial to improving parental well-being, leading to reduced interparental conflict (Finzi-Dottan & Cohen, 2012). Parents may find the emotional support of their friends and family, and even the additional childcare options may result in reduced stress and better adjustment post-divorce.

Satisfaction with Agreements. Johnston's (1994) first dimension in her categorization of conflict is the domain dimension which includes disagreements over financial support, property division, custody, and access to the children. These disagreements can be further grouped into disagreements related to finances and disagreements related to the children (Bergman & Rejmer, 2017). Unsurprisingly, difficulties with access to finances and access to the children lead to conflict between co-parents (Malcore, Windell, Seyuin, & Hill, 2010; Polak & Saini, 2018).

Indirect Parent Characteristics. The fourth theme noted in this review was the effects of indirect parent characteristics on interparental conflict. The term indirect parent characteristics is used to describe attributes of a parent that may influence their overt reactions to a conflict. Examples of these attributes include a parent's defense mechanisms, degree of hatred for the other parents, negative attributions, dualistic thinking, or personality characteristics.

Defense mechanisms result in a distortion of reality and are prevalent when an individual is motivated by self-protection rather than conflict resolution (Cohen & Finzi-Dottan, 2012). Cohen and Finzi-Dottan (2012) note that people with immature defense mechanisms, such as splitting and projection, foster hostility, mistrust, anxiety, and poor communication, among others, that may impact interparental conflict. Further, Cohen and Finzi-Dottan found that mature

defense mechanisms (e.g., humor or altruism) were associated with better co-parenting. These defense mechanisms may result in dualistic thinking. Dualistic thinking occurs when a partner is rigid in their thinking and considers a situation as binary: right or wrong; black or white. Anderson et al. (2010) state that "negative attributions about the other person, tending toward dualistic thinking that vilifies the other and portrays the self as victim or under attack."

Hatred (Smyth & Moloney, 2017) and ambivalence (Ponzetti & Cate, 2008) were described as ways in which a former partner may project personal uncertainties toward a new dynamic. Hatred reflects a strong, negative assessment of the former partner and may manifest as reactive to a situation or deep entrenched hatred (Smyth & Moloney, 2017). Ambivalence, however, reflects a feeling of uncertainty towards a former spouse. Ponzetti and Cate (2008) are unclear if the conflict leads to ambivalence towards one's partner or if ambivalences escalates the conflict.

Finally, the literature suggests that personality characteristics should be considered in determining an individual's impact on interparental conflict. Polak and Saini (2018) note that personality disorders and psychopathology have been found to be prevalent in high conflict parents. Particular attention in the literature has been made to self-differentiation, narcissism, and attachment (Finzi-Dottan & Cohen, 2012; Malcore et al., 2010; Polak & Saini, 2018; Seirup, 2014).

Pervasive Mistrust. Pervasive mistrust is the final theme identified in this review and it is used to describe a parent's distrust, for various reasons, of the other parent, and particularly in their ability to care for the couple's child(ren) (Anderson et al., 2010; Johnston, 1994). In fact, Ponzetti and Cate (2008) found that trust was significantly negatively related to conflict noting that as conflict increased over the marriage dissolution process, dyadic trust decreased. This

review revealed a number of reasons, though unlikely an exhaustive list, of why a parent may distrust the other parent, such as violence and general unfitness to parent, discussed below.

Several articles refer to violence as an indicator of parental conflict in divorcing parents (Anderson et al, 2010; Bergman & Rejmer, 2017; Johnston, 1994; Polak & Saini, 2018; Smyth & Moloney, 2019). These articles suggest that considering violence in a conceptualization of high conflict parents requires understanding the difference between reactive violence and ongoing violent relationships. Reactive violence may occur during the heightened emotional environment during the separation and divorce process versus the ongoing, severely violent relationships categorized by tactics of control, domination, fear, manipulation, and degradation of one spouse by the other (Anderson et al., 2010). A further distinction is made between violence against a former spouse and violence against a child. Violence against a child may come from one of the parents, or it may come from a parent's new partner (Bergman & Rejmer, 2017).

Unfitness to parent is the final "catch-all" term to describe why a parent may mistrust the other. Mental illness falls within this category due to its complex nature and potential influence on a parent's distrust. Other factors that fall within this term include aggression, lack of appropriate housing, and insufficient childcare (Bergman & Rejmer, 2017; Polak & Saini, 2018; Smyth & Moloney, 2019). In fact, substance use of alcohol and/or drugs, was specifically identified by several articles in this review as a reason for a parent to distrust the other (Bergman & Rejmer, 2017; Polak & Saini, 2018; Smyth & Moloney, 2019).

Finally, it is worth noting that several articles (Anderson et al, 2010; Bergman & Rejmer, 2017) describe children resisting or refusing to see a parent (the non-favored parent) as indicative of conflict in divorcing parents. The literature on these resist-and-refuse dynamics is extensive, but it is worth noting that these behaviors may fall under the pervasive mistrust category both for

favored and non-favored parents. For favored parents, it is possible that there is an underlying reason for a child refusing to see the other parent that has little to do with the favored parent, known as realistic estrangement, and this may increase the favored parent's mistrust of the non-favored parent. In true cases of parental alienation, the non-favored parent may rightfully distrust the favored parent as there is a pattern of the favored parent poisoning the child's interactions, or sabotaging access with the non-favored parent (Bergman & Rejmer, 2017).

Discussion

The goal of this review was to analyze the state of the literature and identify the factors contributing to interparental conflict for divorcing parents. Specifically, this study sought to determine (a) What factors contribute to the definition of interparental conflict for divorcing parents? and (b) What factors distinguish levels of interparental conflict (i.e., low to high) for divorcing parents? Eleven articles were identified that met the inclusion criteria and critical findings of these articles are summarized in Table 1.

In the first key finding, this review notes that researchers are continuing to conceptualize conflict and distinguish normative conflict from high conflict. This is evidenced by the new categorization systems offered by several of these articles. Of note, none of these articles categorize conflict by level (i.e., low to high). Instead, these articles discuss high conflict as a unique and salient subtype of conflict in divorce. This suggests that identifying high conflict cases may not be accomplished with one threshold, but may instead require consideration of a variety of factors. For example, any case that has a history of intense domestic violence may be considered high conflict, regardless of how the parents score on a measurement tool or even how the parents consider the conflict. In this instance, physically violent cases represents a subtype of the cases with conflict in divorce. However, the mere presence of physical violence may

implicate several of the themes identified here, including conflict resolution, parent characteristics, and pervasive mistrust, suggesting that it may be possible to define high conflict based on the number of themes that are implicated in a case.

Similarly, the literature does not offer factors that apply to low conflict couples versus high conflict couples, but instead describes numerous factors that *may* indicate high conflict couples. As Polak and Saini (2018) write, conflict is displayed on many levels, from individual personality characteristics to involvement of macrosystems like child protection services. To thoroughly define high conflict would involve consideration of predictors across these many systems. Conclusively, determining a threshold or an identification system for high and low conflict cases would require additional research, including determining if some themes are more predictive of high conflict than others or if the number of themes present in any case is important in classification (i.e., if more themes equate to more conflict).

This review was also uniquely positioned as it sought to look at indicators of pre-divorce conflict, which is an underresearched area of study. This review ultimately synthesized the extant literature to create five themes to consider when evaluating pre-divorce conflict: Conflict Resolution/Communication, Social Network, Satisfaction with Agreements, Parent Characteristics, and Pervasive Mistrust.

Implications

High conflict cases—however defined—continue to receive significant attention from practitioners, researchers, and policymakers. Correctly assessing the level of conflict prior to the divorce judgment may be instrumental in intervention research for clinicians, legal professionals, and policymakers. Clinically, correctly assessing and identifying interparental conflict can facilitate appropriate care and treatment needed to reduce the psychological and physiological

effects of divorce on parents and children (Amato, 1993). While the minority of cases are considered high conflict for legal professionals, they require 90% of family court resources, delaying resolution and burdening the court system (Neff & Cooper, 2004; Smyth & Moloney, 2017). For researchers, this review suggests that a differential approach based on levels of conflict and stage of divorce may be merited.

Further intervention research is needed to conceptualize and implement these interventions and design instruments to measure conflict and direct couples to appropriate interventions. Finally, for policymakers, high conflict divorces present a significant burden on social resources. Families in conflict may overuse social welfare services as allegations of child abuse or neglect are deployed as a litigation tactic (Saini & Binbaum, 2007; Scafadi, 2008). Polak and Saini (2018) note that allegations of child maltreatment in high conflict cases are common and that police and child protection services are frequently involved in high conflict families.

Future research is needed to explore the significance of the five identified themes in identifying pre-divorce conflict. As this study included both empirical and conceptual articles, it will be important to determine if these five themes are empirically supported predictors of pre-divorce conflict. Further, additional research should focus on identifying threshold markers for high and low conflict couples.

Strengths and Limitations of this Review

All studies included in this review were published in English in peer-reviewed journals. It is likely that additional studies exist that were conducted and perhaps published in other languages, or perhaps never published at all, that could have provided further insight into the factors associated with high conflict divorcing parents. Future research should include non-

English literature and grey literature. The decision to exclude these potential articles from this review was made due to the potential unreliability of these findings and the potential bias in the intended audience. As this systematic review was an initial step in the development of a measurement tool, the literature needed to be peer-reviewed.

It is also likely that there is much to learn from the broader conflict literature, not specific to divorce. However, an investigation of the larger construct of conflict was not the aim of this study because it specifically sought to develop the foundational and theoretical knowledge to create a new instrument to measure conflict in divorcing parents. Future reviews could take a more general approach and synthesize the results from studies for all types of conflict literature. Finally, this study reviewed articles published in the social science literature. It is possible that other disciplines, particularly the legal literature, may have other relevant articles. Legal literature was excluded from this search as ongoing legal conflict is a known indicator of high-conflict that is also discussed in the social science literature. This review sought to identify social and mental health indicators of high conflict, in addition to the continuous litigation and legal strategies recognized discussed by legal scholars but also captured in the social science literature.

Despite these limitations, this review also has several strengths. First, this review closely adhered to PRISMA guidelines and used rigorous methods to identify studies. In addition, two reviewers participated in the title, abstract, and full-text review to determine the studies' eligibility. A third reviewer settled any conflicts between the reviewers. Further, this study used multiple sources to identify relevant articles, including reference harvesting of relevant articles. In addition to the use of rigorous methods, this review offers a unique contribution to the divorce literature. To my knowledge, no review to date has systematically examined conflict factors specific to divorcing parents, which is a critical period in setting the tone for interparental

conflict post-divorce. This review provides a valuable contribution to the field of divorce research by synthesizing the current state of the literature on divorce conflict for parents in the process of separation.

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PAPER II

THE PARENTS DIVORCING CONFLICT SCALE: INITIAL TOOL DEVELOPMENT AND EXPLORATORY FACTOR ANALYSIS

Abstract

Practical measures to screen for high levels of pre-divorce conflict offer a unique opportunity for early intervention in divorces where children are at risk of being exposed to high levels of interparental conflict and subsequent maladjustment. There is a lack of validated short screening instruments specifically addressing pre-divorce conflict for parents with at least one minor child. Accordingly, this study describes the development of a self-report measure to assess conflict in parenting couples who are in the process of divorce. An exploratory factor analysis (EFA) was conducted with data from a sample of parents in the process of divorce (N=114), and multiple factor structures were examined. The EFA confirmed that a one-factor model offered the best fit. The short 8-item PDCS is a promising measure for use in research, clinical, and policy settings that captures pertinent themes of conflict, including communication, social network, parent characteristics, satisfaction with agreements, and mistrust.

Keywords: Conflict Scale, Factor Structure, Divorce and Separation

Background

Interparental conflict is a complex construct. Researchers find that high conflict often results in adverse effects for the family as a unit or individual members, most notably the children (Anderson et al., 2010). Children with divorced parents in high conflict dynamics have an increased risk of substance use, mental health and behavioral problems, poor academic performance, and social adjustment issues (Amato, 2000; Arbuthnot et al., 1997; Bacon & McKenzie, 2004; Pedro-Carroll et al., 1999). Families experiencing high conflict can also pose additional burdens on the court and child welfare resources (Saini & Birnbaum, 2007). Although the relationship between high conflict post-divorce and child maladjustment is well documented, the extant social science and legal literature do not clearly define what behaviors or indices are indicative of high interparental conflict (Binbaum & Bala 2010; Haddad et al., 2016).

There is a meaningful difference between pre-divorce conflict, defined as conflict occurring after the decision to separate but before a judgment of divorce, and post-divorce conflict. Interparental conflict immediately following the decision to separate is considered normative and is expected to subside within two years, which may explain why much of the divorce conflict literature focuses on the prolonged conflict, or conflict lasting after the divorce (Buchanan & Heiges, 2001; Emery, 1994; Johnston, 1994; Ponzetti & Cate, 2008). However, improved understanding and assessment of pre-divorce interparental conflict is essential for efficient dispute resolution during the divorce process and for effective service delivery by legal, mental health, and policy professionals addressing the family during this often-stressful family transition and after the divorce. Notably, those in high-conflict marriages are likely to continue with prolonged conflict after the divorce as they have evidenced an inability to employ successful dispute resolution tactics (Johnston, 1994). This prolonged conflict after divorce is a

significant contributing factor to child maladjustment (Emery, 1995; Johnston, 1994). The divorce conflict literature draws a further distinction between high- and low- conflict pre-divorce (during the marriage), with children appearing to benefit from the divorce of parents in high-conflict marriages and suffer from the divorce of parents in low-conflict marriages (Booth & Amato, 2001; Joyce, 2016).

This distinction between pre- and post-divorce conflict suggests that understanding and assessing pre-divorce conflict may be essential to identifying effective interventions for parents who may have the potential for lingering conflict after the divorce. However, overwhelmingly the research on conflict assessment with this population focuses on identifying and assessing post-divorce conflict. This paper sought to fill this gap in the research by developing and testing a short assessment tool for pre-divorce interparental conflict, known as the Parents Divorcing Conflict Scale (PDCS).

Existent Tools Measuring Interparental Conflict

One of the earliest and most frequently used as well as one of the more widely adapted measures of co-parenting quality is the Quality of Coparental Communication Scale, which captures the dimensions of support and conflict in divorced parents (Ahrons, 1981). However, as researchers continue to study interparental conflict, it is clear that it is a multidimensional construct, which may require consideration of various factors, including the co-parenting relationship, communication styles, interpersonal conflict, and violence or aggression (Ferraro, 2018). Therefore, researchers continue to employ a number of scales to measure interparental conflict, many of which focus on post-divorce conflict.

In considering post-relationship conflict, frequently used measures include the Post-Dissolution Relational Communication Index (PDRCI), which specifically evaluates antagonistic

and reassuring communication between former romantic partners (Lambert South & Hughs, 2018); the Post-Divorce Parental Conflict scale (PDPC), which measures parental conflict from the perspective of the child (Morris & West, 2000); and the Psychological Adjustment to Separation Test (PAST) which assesses parental psychological well-being post-divorce (Sweeper & Halford, 2006). More recently, the Divorce Conflict Scale (DCS) was developed to fill the need for a short screening instrument to measure post-divorce conflict (Hald et al., 2020). Although these tools have proven validity and reliability in post-divorce populations, they have not been used in separated couples but are not legally divorced. This gap leaves legal and mental health practitioners without means of assessing the conflict levels in these divorcing parents.

In addressing the lack of pre-divorce assessment tools, practitioners may consider the several tools that exist that measure conflict in romantic relationships. These romantic relationship assessment tools, however, do not specifically consider divorce conflict. These tools include the frequently used 39-item Revised Conflict Tactics Scale (CTS2) (Straus et al., 1996) and the Romantic Partner Conflict Scale (Zacchilli et al., 2009). The literature is insufficient on pre-divorce conflict measurement tools, and the 25-item Level of Conflict Assessment of Divorcing or Separating Couples (LOCA) was the only identified instrument specific to pre-divorce or separation conflict (Langenbrunner et al., 2014).

Given that there are stressors that are unique to couples that are divorcing, rather than just separating, a specific tool for pre-divorce conflict is missing from the literature. Stressors that may exist for a divorcing parent but not a separating parent may include role clarification (e.g., from spouse to now ex-spouse) or the insertion of the adversarial legal system. Further, in developing a pre-divorce-specific tool, there are benefits to developing a short screening instrument for this population as well.

A short screening tool may be used in court, either at the time of filing for divorce or as the case moves through the legal process of divorce. Practically speaking, a short screening tool that takes little time to complete, little physical space to store (many courts still use paper filings), and is less burdensome to participants will be most effective in these cases, particularly when considering the complex nature of defining conflict. As conflict is a complex construct, a single instrument may be unable to capture the many nuances and variations of conflict. As such, a short screening tool could be considered another data point considering the greater question of the degree and type of conflict in a divorcing couple. It is worth noting that the decision to include a short-screening tool rather than a longer measurement tool may mean the complexity of conflict as a variable is oversimplified. However, if the survey results are considered another data point, a shorter screening instrument may offer more flexibility in identifying conflict. With the specificity of a more extensive multi-item scale, practitioners and researchers may be led to over-rely on an instrument that may inadvertently exclude key facets of conflict.

These instruments, compared in Table 2.1, and are not an exhaustive list of available instruments, but are a representation of instruments for various conflict assessments. There are no published short-form validated measures specifically addressing and measuring pre-divorce interparental conflict to this author's knowledge.

Table 2.1

Comparison of Prevalent Conflict Measurement Tools

Instrument	Pre/Post Dissolution	Intended respondent	Number of items	Construct measured
QCCS	Post	Divorced parents	10	Support; Conflict
PDRCI	Post	Previous partners	25	Communication
PDPC	Post	Child of divorce	82	Conflict
PAST	Post	Previous partners	32	Negativity, attachment, conflict

DCS	Post	Divorced parents	6	Conflict
CTS2	n/a	Romantic partners	39	Conflict
RPCS	n/a	Romantic partners	39	Conflict
LOCA	Pre	Divorcing parents	25	Conflict

Note: n/a indicate scales used for in-tact relationships as well as post-dissolution

Components for Interparental Conflict Pre-Divorce

The first step in developing a short-form measurement tool for pre-divorce conflict was to identify predictors for high interparental conflict in divorcing couples. Notably, a review of the extant literature on high conflict divorcing parents revealed wide variability in the definition of "high conflict" with researchers continuing to publish new conceptualizations of the topic as recently as 2019 (Smyth & Moloney, 2019). The variability in defining "high conflict" contributes to the difficulty in identifying predictor variables of "high conflict" and subsequently measuring the construct. Further complicating matters, the literature denotes significant attention to post-divorce conflict, rather than pre-divorce conflict, as evidenced by the assessment tools described in Table 2.1. However, from a systematic review of the literature, possible pre-divorce predictors were identified and categorized into one of five themes: Conflict Resolution/Communication, Social Network, Satisfaction with Agreements, Parent Characteristics, and Pervasive Mistrust.

Conflict Resolution/Communication refers to a couple's communication practices and their tendency to either decrease conflict, as with employing negotiation tactics (Cohen & Finzi-Dottan, 2012), or increase conflict, as with not communicating at all (Bergman & Rejmer, 2017). In differentiating between high-conflict and normative conflict, Anderson et al. (2010) noted that

couples more successful in conflict resolution engaged in issue-focused discussions, rather than person-focused attacks that are frequently seen with high conflict couples.

The social network theme pertains to the influence surrounding friends, family, or communities may have on the couple's conflict, particularly when a parent may feel that their community is not supportive of the co-parenting relationship (Finzi-Dottaan & Cohen, 2012; Polak & Sainii, 2018). Social networks may have a protective or risk factor influence on a couple's conflict. Social networks may be imperative to supporting a parent and encouraging a co-parenting relationship that ultimately reduces conflict. However, if the social network is not supportive, or if triangulation occurs when a third party becomes involved in the couple's dynamic through gossip and/or venting, than the conflict may be increased or prolonged (Anderson et al, 2010).

Research also notes that a parent's satisfaction with underlying agreements pertaining to custody and finances decreases interparental conflict (Berger & Rejmer, 2017; Johnston,1994; Malcore et al., 2010; Polak & Saini, 2018). Financial disagreements may pertain to child support, but they may also pertain to property division or an equitable division of financial obligations for the child's medical or extracurricular activities.

The next predictor category pertains to parent characteristics that may influence the conflict, for example: hatred for the other parent (Smyth & Moloney, 2017); immature defense mechanisms (Cohen & Finzi-Dottan, 2012); or personality disorders (Finzi-Dottan & Cohen, 2012; Malcore et al., 2010; Polak & Saini, 2018; Seirup, 2014). Ultimately, with these parent characteristics, the conflict is not discussed in an issue-focused manner, but rather in a person-focused manner. The individual may be motivated by self-protection rather than issue resolution (Cohen & Finzi-Dottan, 2012). For example, for those with mature defense mechanisms, such as

humor, an issue may be resolved quickly rather than prolonged with an increase of anxiety or mistrust.

The final category, perceived mistrust, pertains to a parent's perception of a justified reason for mistrusting the other parent, perhaps due to violence (Anderson et al., 2010; Bergman & Rejmer, 2017; Johnston, 1994; Polak & Saini, 2018; Smyth & Moloney, 2019); substance use (Bergman & Rejmer, 2017; Polak & Saini, 2018; Smyth & Moloney, 2019), or unfitness (Bergman & Rejmer, 2017; Polak & Saini, 2018; Smyth & Moloney, 2019).

These five themes informed the development of the PDCS and it was hypothesized that all five of these themes represent a singular underlying construct: conflict. It is possible that several of these themes may be more closely related than others and that a two- or three-factor model may present itself. For example, if one is satisfied with an agreement, this may result from a successful conflict resolution or communication style. Similarly, one may have pervasive mistrust as a result of some parenting characteristics. This would mean that these four themes could collapse into two themes such that (1) conflict resolution and (2) satisfaction with agreements align to create a new theme (e.g. "resolution") and (3) parent characteristics and (4) perceived mistrust align to create a new theme (e.g. "parent attributes"). In this instance, with the addition of the final theme of social network, we may see a three-factor model. It is also possible that social network may align with either of these two collapsed themes, such that the social network influences whether conflict is resolved or perhaps the social network is a source of mistrust. In that instance, we would see a two-factor model. Ultimately, these themes seem to group together in a number of ways, indicating that a one-factor model may be most applicable as the underlying theme would simply be conflict.

Current Study

The purpose of this study is to develop, determine the factor structure, and describe the scale development process of the PDCS measure, which captures the primary construct of pre-divorce conflict for parents with at least one minor child. The timeframe of "pre-divorce" is defined as the time after the decision to separate as a couple but before the judgment of divorce is rendered. This study follows the guidelines proposed by experts in psychometrics (see Cabrera-Nguyen, 2010; DeVellis 2017; Muthen & Muthen, 2009; Worthington & Whittaker, 2006). More specifically, this study will present: (1) the procedures used to develop a new scale of conflict for divorcing parents; (2) efforts towards identifying the factor structure of the PDCS; and (3) explore the hypothesized one-factor structure of the PDCS.

Methods

Data Collection

Instrument Development

Through a systematic review of the theoretical and empirical literature, the results of which are reported in Paper 1, an initial list of 30 items was generated. The items were generated from a thematic coding procedure in which articles were reviewed for salient themes: conflict resolution/communication, social network, satisfaction with agreements, parent characteristics, and pervasive mistrust. From these salient themes, 30 items were generated. Following recommendations by DeVellis (2017), feedback was solicited at several time points during the instrument development to include expert review and pilot testing. After expert review, these 30 items were reviewed and condensed to 10 items which are displayed in Table 2.2, which were then piloted on a small sample of participants (n = 9).

Expert Review

Field experts (n = 9) were consulted to identify possible issues with conceptualizing the primary construct of interest. The 30-item pool was submitted to content and measurement experts (Bradburn et al., 2004; DeVellis, 2017). These experts included judges (n = 2), mental health professionals in the field of family law (n = 2), family law attorneys (n = 3), and measurement experts (n = 2). Modifications made to the measure based on expert feedback included: change in response format (i.e., changing from an agree to disagree scale to a frequency scale); elimination of redundant questions (i.e.., expressing a similar idea in somewhat different ways through multiple items); rewording of misleading or ambiguous phrasing (e.g., changing "My co-parent and I can have a conversation on problems concerning our children" to "My co-parent and I can have a *civil* conversation on problems concerning our children"); and improvement in clarity (e.g., double-barreled items or unnecessary wordiness).

From this feedback, the 30-item instrument was synthesized into a 10-item instrument. For example, there were four items originally generated to address pervasive mistrust: 1) I am concerned my c-parent cannot adequately care for my child(ren); 2) I am concerned my co-parent exposes our child(ren) to violence, substances, or inappropriate conduct; 3) My co-parent is appropriate with my child(ren); and 4) My child(ren) and I are safe with my co-parent. These four items were collapsed into two items: 1) I am concerned my co-parent cannot adequately care for my child(ren) and 2) My child(ren) and I are safe around my co-parent.

Piloting the Measure

The 10-item instrument was then entered into Qualtrics, an online survey platform. Instructions for completion of the instrument were drafted and questions to collect demographic data were added. A self-administered pilot test of the 10-item instrument was conducted with

parents (n = 9) in the process of divorce. These participants were selected by convenience due to their similarity with the instrument's target population, namely being in the process of divorce and having at least one minor child.

These nine parents also participated in cognitive interviews to provide validity evidence that explains how respondents interpret and respond to the 10-item PDCS. Following recommendations from Willis (1999) and Boeije and Willis (2013), participants were asked to rephrase survey questions in their own words, provide their understanding of specific words, and note any confusing or unclear terminology. Overall, there was a high level of understanding of the survey items among pilot participants. Some formatting suggestions were adopted, instructions were clarified, and specific terms (e.g., "benefit") were interpreted in ways that were different from what was intended (e.g., actual observed benefit versus the overall assumption of a benefit to having two involved parents) were altered. Thus, modifications to the instrument following the completion of the pilot test included: clarifying that the measure is concerned with the respondent's perception of events and adding additional page breaks to the online instrument. Table 2.2 shows the final PDCS items, after expert review and pilot testing. All items use a 4-point likert scale set of response options (1= never; 2= rarely, 3= often, 4= always).

Table 2.2

PDCS Item Iterations

Conflict Dimension	Original Items	Final Items
Conflict Resolution/ Communciation	I can explain my side of a disagreement to my co-parent. My co-parent shows respect for my feelings on a disagreement My co-parent can explain their side of a disagreement to me I can agree to try a solution to a disagreement relating to our children that my co-parent suggest. My co-parent and I communicate well.	My co-parent and I communicate well. I can negotiate with my co-parent. My co-parent and I can have a conversation on problems concerning our children.

	My co-parent's personality is extremely different from mine. I can negotiate with my co-parent. My co-parent and I can have a conversation on problems concerning our children.	
Social Network	My close friends and family support my co-parenting relationship. My close friends and family speak negatively about my co-parent.	*My close friends and family support my relationship with my co-parenting.
Parent Characteristics	My co-parent and I share in childrearing tasks. My co-parent and I can attend an event for our child(ren) at the same time. My child(ren) benefit from a relationship with my co-parent. My co-parent puts my child's well-being first. I can remember good times in my marriage. I am able to laugh at myself pretty easily. People tend to mistreat me. I respect my co-parent. My co-parent helps me see different perspectives in childrearing. I have forgiven myself for the breakup of the marriage. I have forgive my co-parent for the breakup of the marriage. I trust my co-partner. My co-parent caused the breakup of the marriage.	My co-parent and I share in childrearing tasks. My child(ren) benefit from a relationship with my co-parent.
Satisfaction with Agreements	I feel satisfied with the agreement to divide our property, assets, and debts. I feel satisfied with our agreement to financially support our child(ren). I feel satisfied with our agreement on parenting time.	*I feel satisfied with our agreement on parenting time. I feel satisfied with our agreement on financial matters.
Pervasive Mistrust	I am concerned my co-parent cannot adequately care for my child(ren). I am concerned my co-parent exposes our child(ren) to violence, substances, or inappropriate conduct. My co-parent is appropriate with my child(ren).	I am concerned my co-parent cannot adequately care for my child(ren). My child(ren) and I are safe around my co-parent.

	My children and I are safe around my co-parent.

Note: * indicates items dropped from the final model

Data Collection

The final step in the scale development process was to complete an exploratory factor analysis of the 10-item version of the instrument iteratively developed through research and expert and cognitive interviews. Exploratory factor analysis empirically explores the scale's properties, including the number and meaning of the constructs that underlie the instrument and the individual item quality (DeVellis, 2017). Muthén and Muthén (2009) advise a small pilot of the instrument for exploratory factor analysis. The revised PDCS was entered into Qualtrics, and a sample of 114 parents of minor child(ren) in the process of divorce was recruited through reddit, a social networking website where communities, or "subgroups," are created based on interests. The Qualtrics survey was sent to divorce and family law-related subgroups. Potential subjects were informed that their participation was voluntary, and the study was reviewed by the IRB at the University of North Carolina—Chapel Hill, IRB #20-2379.

Data Analysis

Descriptive Analysis

Distributional properties of the items and correlations between items were reviewed to confirm linear relations among observed variables (Table 2.3 and 2.4). Minimal missing data was observed. Table 2.3 shows that, per item, the maximum missing data was one response (0.88 of the sample). As the missing data stemmed from one instrument, it is assumed that participants began the survey and did not complete it. As a result, that participant's data was removed from all analyses.

Table 2.3

Distributional properties of PDCS items

Response Options	Item 1 n [%]	Item 2 n [%]	Item 3 n [%]	Item 4 n [%]	Item 5 n [%]	Item 6 n [%]	Item 7 n[%]	Item 8 n [%]	Item 9 n [%]	Item 10 n [%]
1	22 [19.30]	29 [25.44]	23 [20.18]	10 [8.77]	31 [27.19]	16 [14.04]	23 [20.18]	45 [39.47]	19 [16.67]	12 [10.53]
2	55 [48.25]	46 [40.35]	41 [35.96]	23 [20.18]	32 [28.07]	31 [27.19]	20 [17.54]	25 [21.93]	29 [25.44]	22 [19.30]
3	29 [25.44]	24 [21.05]	28 [24.56]	46 [40.35]	24 [21.05]	30 [27.19]	43 [37.72]	29 [25.44]	36 [31.58]	29 [25.44]
4	8 [7.02]	15 [13.16]	22 [19.3]	34 [29.82]	25 [22.81]	36 [31.58]	27 [23.68]	14 [12.28]	29 [25.44]	50 [43.86]
Missing	NA	NA	NA	1 [0.88]	1 [0.88]	1 [0.88]	1 [0.88]	1 [0.88]	1 [0.88]	1 [.88]

Table 2.4

Correlations among PDCS items

	M(SD)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
Item 1	2.20(.87)	1.00									
Item 2	2.22(.98)	.77*	1.00								
Item 3	2.43(1.0)	.77*	.76*	1.00							
Item 4	2.92(.93)	.44*	.44*	.40*	1.00						
Item 5	2.40(1.12)	.56*	.59*	.63*	.43*	1.00					
Item 6	2.76(1.05)	.52*	.48*	.57*	.23*	.53*	1.00				
Item 7	2.65(1.06)	.29	.33*	.34*	.14	.17	.29*	1.00			
Item 8	2.10(1.07)	.60*	.59*	.58*	.33*	.44*	.50*	.52*	1.00		
Item 9	2.66(1.04)	.61*	.51*	.64*	.33*	.67*	.67*	.27*	.52*	1.00	
Item 10	3.03(1.03)	.60*	.54*	.61*	.36*	.50*	.54	.11	.42*	.66*	1.00

*Note: * indicates that correlations were statistically significant (i.e., p<.05)*

Exploratory Factor Analysis

All analyses were conducted in Mplus Version 8.4 (Muthen & Muthen, 2019). The Mplus method for weighted least squares means and variance adjusted (WLSMV) was used, as it provides accurate parameter estimates and a model fit that is more robust to ordinal data (Li, 2015; Muthén & Muthén, 2019). Mplus' default oblique rotation method was retained, as it is less restrictive (DeVellis, 2017; Cabrera & Nguyen, 2010). Decisions about determining the number of factors were made after attending to multiple pieces of information, including scree plots of eigenvalues, communality estimates (i.e., values > .5), rotated factor loadings (i.e., values > .3; Costello & Osborne, 2005), the presence of a simple solution of interpretable factors, and model fit measures (i.e., Chi-square; RMSEA: mediocre if 0.8 to 10, good if < .05; CFI/TLI, acceptable if > .90, excellent if > .95; Hu & Bentler, 1999; Kline, 2005).

Results

Sample Description. One hundred and fourteen divorcing parents provided responses on the PDCS instrument. This sample size was deemed adequate as there were approximately eleven responses for each item (Worthington & Whittaker, 2006). There was nearly an even split between male (n = 54, 47.37%) and female (n = 57, 50%) participants. On average, participants were 36.83 years old (SD = 6.78 years). Most participants had 2 or fewer children with their former partners (n = 98, 86%), and were employed full or part-time (N = 100, 87%). Forty-two participants (36.84%) earned a combined household income of at least $100,000 in 2019. Forty-two (37%) participants described their relationship with their co-parent as hostile, 47 participants (41%), reported that their relationship with their co-parent was civil, while 22 participants (19%) categorized their relationship with their co-parent as friendly or very friendly. Twenty-four participants (21%) reported a restraining order between them and their co-parent had been applied for. Of these, a restraining order was put in place between 19 participants and their co-parents (79% of participants who reported that a restraining order was applied for, 17% of total participants). A full description of the sample is presented in Table 2.5.

Table 2.5

Sample Description

Variable	Frequency[%]
Relationship with co-parent	
Hostile	42 [36.84]
Civil but not friendly	47 [41.22]
Friendly	15 [13.16]
Very Friendly	7 [6.14]
Restraining order with co-parent	
No	89 [78.07]
No, but one was applied for	5 [4.39]
Yes	19 [16.67]
Gender	
Male	54 [47.37]
Female	57 [50.0]
Another	2 [1.75]

	[M(*SD*)]
Age	36.83 (6.78)
Average number of children [M*(SD)*]	1.74 (.72)
Average age of children in year [M(*SD)*]	7.38 (4.31)
Country of Residence	
USA	97 (89.0)
Non-USA	12 (11.0)

Exploratory Factor Analysis Results. The initial EFA (i.e., Version 1) included all 10 piloted PDCS items and explored whether a one, two, or three-factor model provided the best fit. Despite the RMSEA improving in the two- and three-factor models, the decision to move forward with a one-factor solution was supported by the scree plot of eigenvalues, communality estimates (i.e., values > .5), rotated factor loadings (i.e., values > .3), the presence of a simple solution of interpretable factors for a one-factor model, and in consideration of the other model fit measures. Additionally, a review of the relevant literature led to a one-factor model hypothesis. Ultimately, the one-factor Version 1 of the PDCS demonstrated high reliability (α = .90).

Two items with communalities less than .5 were removed for subsequent analyses because low communalities indicate that the latent construct accounts for only a small proportion of variation in the measured variable responses (Fabrigar & Wegener, 2012). Factor loadings and communality estimates for the one-factor solution of all piloted PDCS items can be found in Table 2.6. Model fit measures can be found in Table 2.7.

The decision to drop two items is supported based on a review of the theoretical and empirical literature. It is posited that these items (#4 and #7) may reflect circumstances that increase conflict post-divorce, but may not have the same effect pre-divorce. These items, one pertaining to social network support for the co-parenting relationship and the other pertaining to satisfaction in parenting schedule, both reflect circumstances likely to change after divorce. For example, a couple still married but in the process of divorce may continue to live together, which

may mean that a couple's social network is still supportive of the relationship and that access to children is unfettered.

A subsequent EFA (i.e., Version 2; Final Version) included 8 PDCS items. Multiple factor-structure models were run to confirm findings from Version 1 that a one-factor model provided the simplest solution. The Version 2 EFA produced a one-factor solution as evidenced by the scree plot of eigenvalues, the presence of a simple solution of interpretable factors, and model fit measures. More specifically, rotated factor loadings ranged from 0.71 to 0.92, well above the 0.3 threshold, and all communalities were ≥ 0.5. Although the RMSEA indicated mediocre (at best) fit to the data, other fit indices indicate very good fit to the data (χ^2 =60.32*; df*= 20*; RMSEA* [90%CI]= .133 [095, .172]; CFI= .985; TLI= .979). A review of communality estimates and rotated factor loadings confirmed that all 8 items met the criteria for inclusion in the final version. Version 2 (the final version) of the PDCS demonstrated high reliability (α = .92). Factor loadings and communality estimates for the final PDCS items can be found in Table 2.6 and model fit measures can be found in Table 2.7.

Table 2.6

Communalities and rotated factor loadings for PDCS items

	Version 1		Version 2; Final Version	
	Communalities	Rotated factor loadings	Communalities	Rotated factor loadings
Item 1	0.84	.92	0.84	.92
Item 2	0.79	.89	0.79	.89
Item 3	0.83	.91	0.83	.91
Item 4	0.28	.53	*NA*	*NA*
Item 5	0.61	.78	0.61	.78
Item 6	0.54	.73	0.55	.74
Item 7	0.17	.42	*NA*	*NA*
Item 8	0.54	.73	0.50	.71
Item 9	0.74	.86	0.75	.87
Item 10	0.62	.79	0.63	.79

Table 2.7

Model Fit Indices for PDCS

	$\chi^2(df)$	RMSEA [90% CI]	CFI	TLI
EFA Full	110.57(35)	.138 [.109, .167]	.972	.964
EFA Reduced (Final)	60.32(20)	.133 [.095, .172]	.985	.979
EFA- two factor	65.65(26)	.116 [.081, .151]	.985	.975
EFA- three factor	20.25(18)	.033 [.000., .092]	.999	.998

*$p < .05$; **$p < .01$; ***$p < .001$

Discussion

This study's goals were to develop, determine the factor structure, and describe the scale development process of the PDCS measure, which captures the primary construct of pre-divorce conflict for parents with at least one minor child. This study followed the scale development guidelines proposed by experts in the field of psychometrics. To test the hypothesis of a one-factor construct, three separate EFAs were conducted using the data collected as part of the PDCS measure's small pilot. Exploratory Factor Analyses (EFA) were conducted to evaluate the factor structure of PDCS as well as to explore the psychometric properties of specific items. EFA provides a statistical method for construct identification, allowing researchers to rely on more than intuition and theory in developing and evaluating new measurement instruments (Fabrigar & Wegener, 2012). Ultimately, two items were dropped as they did not meet the communality estimates cutoff criteria (i.e., >.50).

The first dropped item (“My close friends and/or family support my co-parenting relationship”) is reflective of the robust research identifying the contributions social networks, including family and friends, can have on the well-being of divorced individuals (Cohen & Savaya, 2000; McCurdy, 2005; Finzi-Dottan & Cohen, 2012). However, there is divergent

research about the role that social networks play in divorce conflict as social networks can impede or support harmonious co-parenting (Johnston & Campbell, 1988). Finally, like the majority of research on interparental conflict and divorce, this research focuses on post-divorce. It is possible that the variable of social networks functions differently for conflict pre- and post-divorce.

Similarly, the second item dropped from the PDCS instrument due to lack of fit ("I feel satisfied with our parenting time schedule") may also be because of this scale's specific focus of pre-divorce conflict where these parents are still litigating and determining what a parenting time schedule will look like post-separation. Further, Bergman and Rejmer (2017) found that pre-divorce disputes relating to the scarce resource of time with the child amounts to a conflict of interest and in their analysis of 33 cases, their study found that conflict of interest is less common than conflict of values, or differences in opinions.

The remaining eight items of the PDCS represent four of the five themes identified in the systematic review of Paper 1: Conflict resolution/communication, parent characteristics, satisfaction with agreements, and pervasive mistrust. The fifth theme, social network, did not fit in the model, and the lack of fit, as discussed above, may be supported by the theoretical literature, both as it pertains to the stage of divorce (pre-divorce) and the ambiguity around the significance of social network on divorce conflict. The four remaining themes create the final 8-item instrument, which shows a one-factor model with high reliability (α =.92). The significance of the one-factor finding shows that these four themes speak to the singular underlying construct of pre-divorce conflict.

This study aimed, in part, to develop a pragmatic instrument. In developing the PDCS, several criteria were considered to support the practical use of the instrument (Powell et al.,

2017). At 8 items, the PDCS is brief relative to any existing instrument measuring interparental conflict and significantly shorter than the LOCA, the only other known divorcing conflict scale (Langenbrunner et al., 2014). The PDCS does not require multiple steps for scoring, such as including reverse-scoring items. When considering this instrument's ease, the PDCSS may be administered by pen and paper or through electronic means.

Limitations

The current study has several limitations pertinent to external validity worth noting. This study's convenience recruitment strategy does not ensure that the participants represent the entire population, eliminating generalizability claims. Additionally, participant selection bias may exist as the study was posted on social media and participants volunteered to take the survey. Therefore, those who responded to the survey may have a predisposition to continued discussions around their divorce, which may be indicative of high conflict behavior. Similarly, as the PDCS is a self-report measure, it is prone to the participants' social desirability, which may have led to bias in their reporting. Worth considering is whether participants would consider scoring high or low on the PDCS as being more socially desirable. Some participants may wish to score high on the scale to validate their decision to divorce or to access interventions. Other participants may wish to score low on the scale to avoid interventions as many interventions may require collaboration with an ex-partner. As this study was a pilot test, it is unlikely that these social desirability considerations exist, but future research should consider these possibilities. Finally, the sample was recruited via an electronic survey published in a number of subgroups on reddit. It is possible that people responded to the instrument more than once, which would violate the independence of observation assumption.

Despite these limitations, this study's results represent significant progress towards understanding pre-divorce conflict in parents with at least one minor child. It provides statistical insight into defining the construct of pre-divorce conflict. Prior to developing the PDCS, there has not been a validated short screening instrument that captures pre-divorce conflict as prior measures overwhelmingly focus on post-divorce conflict. This study helped close this research gap, though future psychometric research is needed to replicate the present study's findings.

Future research

Although this EFA has promising results, the PDCSS is a new instrument that requires further evaluation. The PDCS should be investigated through confirmatory factor analysis, instrument validation efforts, and additional reliability testing. Further, additional assessment of the PDCS as a pragmatic instrument will require legal and mental health professionals to assess whether the PDCS is compatible with their needs and whether its results are helpful in decision-making. With continued development and future implementation, the PDCS may strengthen its claim as a pragmatic instrument.

Conclusion

This study's findings provide preliminary evidence of the reliability and validity of the 8-item Parents Divorcing Conflict Scale for evaluating pre-divorce conflict. The PDCS is highly applicable in research, clinical, and policy settings and merits further investigation of its reliability and validity with a larger sample size. The Parents Divorcing Conflict Scale has significant implications for legal and mental health practitioners as a short screening tool to identify families that may need more intensive support during and after the divorce. For researchers and policymakers, this screening instrument also offers a differential understanding

of couples in the process of divorcing, which creates new possibilities for designing interventions and creating policies that address specific subgroups of divorce conflict

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PAPER III

CONFIRMATORY FACTOR ANALYSIS AND INVARIANCE TESTING OF THE PARENTS DIVORCING CONFLICT SCALE

Abstract

Empirical evidence from the social science literature suggests that interparental conflict is a significant risk factor for child maladjustment post-divorce. As such, considerable attention, including the development of measurement tools, has addressed the interparental conflict in divorced families. However, short, validated measures of interparental conflict for couples undergoing a divorce do not exist. The current study helps fill this research gap by conducting a confirmatory factor analysis of the PDCS using a sample of 352 divorcing parents. Measurement invariance tests confirm that the one-factor model is generalizable across gender and groups with high or low court appearance rates. Given its psychometric properties, the PDCS might be useful for future research on predictors for pre-divorce conflict and creating conflict-reduction interventions during the divorce process.

Keywords: conflict scale, factor structure, factor analysis, divorce, and separation

Background

The theoretical and empirical literature is diverse regarding the impact of divorce on children as children are exposed to different stressors unique to their specific divorce, and they have unique abilities to cope with these stressors (van der Wal et al., 2018). Regardless of these variations, apparent consensus exists that children exposed to the stress of a high-conflict divorce are at heightened risks for dysfunctional adjustment following parental divorce. Despite this recognition of the risk high conflict divorce presents for children, there is still no clear definition of what constitutes "high-conflict" divorce (Anderson et al., 2010). Furthermore, studies often focus retrospectively on post-divorce information, typically assessing whether the experience of having divorced parents affects child adjustment and what factors (often conflict) impact that adjustment (Amato, 2000; Hetherington, 1991; Kelly, 2000). Little attention has been dedicated to the study of interparental conflict during the divorce process and the effects on child adjustment post-divorce.

With a closer look at interparental conflict during the marriage, and particularly during the divorce process when parents have decided to end their marriage, it may be possible to identify families at risk of prolonged conflict, even after the divorce. Early and successful identification of families at risk can lead to these families receiving appropriate interventions that may mitigate the effect(s) of the divorce on the child(ren). To accomplish this goal, legal and mental health professionals should employ pragmatic, reliable, and valid assessment tools. However, the literature lacks a short-standardized pre-divorce interparental conflict assessment tool.

Through confirmatory factor analysis, this paper seeks to validate an instrument, known as the Parents Divorcing Conflict Scale (PDCS), which is specifically designed as a short

screening tool for pre-divorce interparental conflict. This paper also conducts invariance testing on two subgroups to determine if the instrument successfully measures pre-divorce conflict in different circumstances, namely based on gender and frequency of court appearances.

Prior Evidence of PDCS Construct Validity

The PDCS was designed through an iterative process, beginning first with a pool of 30 items generated from a review of the relevant theoretical and empirical literature. Considerable attention was devoted to the study of published instruments assessing conflict in romantic or formerly married partners. These 30 items were then submitted for expert review by mental health professionals (n = 2), legal professionals (n = 5), and measurement professionals (n = 2). Employing feedback from these experts, the 30 items were reduced to eliminate redundant themes, and items were refined to create a 10-item instrument. This 10-item instrument was then pilot tested (n = 9) using a self-administered online survey and cognitive interviews to determine the functionality of the instrument. After refinement based on expert review and pilot testing, exploratory factor analysis was conducted on this initial version of the 10-item PDCS with a sample of 114 participants. Demographic data was also collected from these 114 participants.

The exploratory factor analysis considered a one, two, and three factor-model to determine which model provided the best fit. Initial analyses suggested a one-factor solution requiring removing two items with communalities less than .5 from subsequent analyses (Fabrigar & Wegener, 2012). A subsequent EFA suggested that the PDCS is an eight-item measure addressing the singular construct of co-parent conflict among pre-divorce parents evidenced by the scree plot of eigenvalues, the presence of a simple solution of interpretable factors, and model fit indices (χ^2(df): 60.32(20), RMSEA [90% CI] .133 [.095, .172], CFI .985, TLI .979. Although the RMSEA indicated a mediocre (at best) fit to the data, other fit indices indicate very good fit to the data (Chen, Curran, Bollen, Kirby, et al, 2008). Rotated factor

loadings of the final, 8-item version of the PDCS measure ranged from 0.71 to 0.92. The PDCS was also found to have high reliability (α = .92). This current study extends the evidence for the use of the PDCS through a confirmatory factor analysis and invariance testing.

Basis for Invariance Testing

Despite the promising results from the exploratory factor analysis, only the overall factor structure of the PDCS has been identified and potentially confirmed with the current study. Next, it is important to determine if the PDCS has configural, metric, and scalar invariance such that the PDCS items have similar meaning across various participant contexts (Bryant & Satorrab, 2012). Configural invariance would indicate that the PDCS with participants from different contexts maintains the same factor structure. Metric invariance would establish that the items function the same across contexts. Finally, scalar invariance would establish that parents from different contexts provide the same mean scores on the items when reporting the same degree of conflict, allowing for meaningful comparisons of mean differences across groups. Specifically, these invariance tests seek to offer unbiased assessments of the differences in conflict for divorcing parents from various backgrounds. The varying contexts this study conducts invariance testing for are gender and frequency of court involvement.

Gender may have a significant role in divorce conflict, particularly when one considers systemic gender inequities, especially in the United States. From an economic lens, women are often at a financial disadvantage to men. In an adversarial court setting dependent on negotiation, bargaining, and, often, the ability to afford competent legal counsel, women may be unable to compete or may be influenced by societal expectations (Wilkinsson-Ryan & Small, 2008; Yodanis, 2005). As society expects women to be more docile and domestic than men, women may make financial concessions to maintain peace or gain more parenting time (Yodanis, 2005).

Men, too, can be affected by societal expectations as some people, including judges and lawyers, may have more gender-stereotypical views of parenting that may hinder a father's claim to custody of the parties' shared children (Birnbaum & Bala, 2010).

Divorcing parents also have different backgrounds regarding the number of times they have attended court during their divorce. "High conflict" is often described as having high rates of re-litigation or returns to court (Deutsch & Kline-Pruett, 2009). However, some return court-involvement is expected in any divorce proceeding, and these unavoidable appearances are usually resolved in the first year(s) of litigation (Henry et al., 2009). Noting that some court is unavoidable, it is within reason to wonder if there is something different about the high conflict couples who go to court more than five times. For example, the literature identifies personality disorders or other mental health concerns that may drive high rates of re-litigation (Neff & Cooper, 2004; Johnston & Campbell, 1988: Johnston & Roseby, 1997). Ultimately, if there is something different about the highly litigious divorcing couples, invariance testing would be appropriate to determine if a measurement tool functions similarly with this subgroup.

Invariance testing for gender and the number of court appearances will offer initial evidence regarding the PDCS's use across backgrounds. Although more invariance testing will be needed in future confirmation of the PDCS's validity, the exploration of gender and court appearances is merited given the known effect these two contexts may have on conflict. These two invariance tests offer an initial threshold to determine whether the continued study of the PDCS as a short screening tool is warranted.

Current Study

This study's objective was to assess the construct validity of the PDCS, which measures conflict between divorcing parents of minor children. A confirmatory factor analysis was used to verify the one-factor structure from the EFA results and to examine whether the underlying

factor structure, factor loadings, and item intercepts are similar for different genders and those with frequent court intervention. This study used cross-sectional data from 352 participants, and the institutional review board of the University of North Carolina at Chapel Hill reviewed all data collection methods (IRB #20-2379).

Methods

Data Collection

Parents in the process of divorce and having at least one minor child were invited to participate in this study and assess their current relationship with their co-parent using the revised, eight-item PDCS measure. Each question prompted participants to rate the perceived frequency with which certain behaviors (e.g., "can negotiate," or "can have a civil conversation") occur in their relationship with the other parent to their child(ren) using a four-points scale where a score of 1 reflected "*never"* and a score of 4 indicated "*always."* The PDCS is scored such that the lower total score on the instrument reflects a low pre-divorce conflict assessment. The eight-item PDCS measure is presented in Table 3.1.

Table 3.1

PDCS Items

Conflict Dimension	**Final Items**
Conflict Resolution/ Communciation	1. My co-parent and I communicate well. 2. I can negotiate with my co-parent. 3. My co-parent and I can have a conversation on problems concerning our children.
Parent Characteristics	4. My co-parent and I share in childrearing tasks. 5. My child(ren) benefit from a relationship with my co-parent.
Satisfaction with Agreements	6. I feel satisfied with our agreement on financial matters.
Pervasive Mistrust	7. I am concerned my co-parent cannot adequately care for my child(ren).

8. My child(ren) and I are safe around my co-parent.

In addition to the eight-item PDCS scale, demographic information and descriptive information about involvement with the court and family law systems were collected from participants. Participants were asked to indicate their gender with a three-item response option including "*male,"* "*female,"* and a third, open-ended option that invited participants to list their gender. Five participants selected this third option and their responses to this item were recoded as missing due to small sample size. Participants were also asked to indicate how often they had returned to court since filing for divorce using a four-item response scale where a score of 1 indicated "*0-1 times,"* a score of 2 indicated "*2-5"* times, a score of 3 indicated "*6-10"* times, and a score of five represented "*11 or more"* times. Responses were collapsed into two categories indicating "*5 or fewer"* or "*6 or more"* returns to court since the divorce filing. The decision to collapse the first and second options into one group and the third and fourth options into another group is grounded in the literature that recognizes that some Court involvement is inevitable, but a lot of court involvement may indicate high conflict. Therefore, response option 2 (2-5 times) was likely to capture the typical divorce participant, and items 3 and 4 could possibly capture a unique subgroup (Malcore et al., 2010).

Data Collection

Participants (n=352) were recruited through reddit, a social networking website where communities, or "subgroups," are created based on interests. A "post" was made in these subgroups inviting parents of at least one minor child who are in the process of divorce to complete an online survey by clicking the Qualtrics link attached. In the original post and when a participant clicked the Qualtrics link, potential subjects were informed that their participation was voluntary.

Data Analysis

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to verify the one-factor structure from the EFA results. All analyses were conducted in Mplus Version 8.4 (Muthen & Muthen, 2019). The Mplus method for weighted least squares means and variance adjusted (WLSMV) was used, as it provides accurate parameter estimates and a model fit that is more robust to ordinal data (Li, 2015; Muthén & Muthén, 2019). The following multiple statistics were used to evaluate the goodness of all model fits: chi-square statistic (χ^2) and its *p*-value, root mean square error of approximation (RMSEA; mediocre if .08 to .10, good if <.05), and comparative fit index (CFI; acceptable if > .90, excellent if > .95; Hu & Bentler, 1999; Kline, 2005). Factor loadings equal to or greater than .30 were deemed adequate (Costello & Osborne, 2005).

Group Invariance Tests

In addition to assessing the fit of the PDCS, the scale's invariance was examined across (1) gender and (2) the number of times participants appeared in court since filing for divorce. The invariance tests assessed whether the parameters of the co-parent conflict measurement model were statistically identical for men and women, and for parents who have returned to court five or fewer times since their divorce filing, and six-or-more times since their divorce filing.

To complete the gender invariance testing, separate models for males and females were examined to confirm the adequacy of the model for each gender (Bowen & Masa, 2015). Next, gender invariance tests were conducted by estimating a succession of three-nested models, starting with the least constrained to the most constrained model: configural, metric, and scalar models. Chi-square difference tests were used to assess whether the nested comparison models fit the data equally well as the next-least restrictive model (Bryant & Satorrab, 2012). This three-

step procedure was repeated to test for invariance by the number of court appearances since filing for divorce.

Results

Sample Characteristics

Fifty-seven percent of the sample is male. On average, participants were 35.33 years old (*SD*= 10.41) and had between one and two children with their former partner (*M* =1.78, *SD*=.86). Most participants appeared in court five or fewer times since filing for divorce (78%).

CFA Results

The one-factor CFA showed acceptable fit (χ^2(*df*): 90.42(20), RMSEA [90% CI]: .107 [.085, .130], CFI .980, TLI .972 and nearly identical results of the EFA. Although the RMSEA indicated mediocre (at best) fit to the data, other fit indices indicate a very good fit. Two tactics were used in an attempt to improve the model fit. First, modification indices were examined to see whether any correlated errors could be added to the model. However, no suggested model modifications were suggested using the MPlus default threshold for modification indices (i.e., 10). Second, the threshold for the modification indices was lowered to 5 and still no modifications were suggested. Additionally, a review of the relevant literature suggests that the RMSEA with small sample sizes may falsely indicate a poorly fitting model (Kenny, Kaniskan, & McCoach, 2015). Additionally, overreliance on one single fit index is "*imprudent,"* as is "*any effort to identify universal cutoff points for the RMSEA"* (Chen et al., 2008, pp. 490-491). Supported by the theoretical and empirical literature on the construct as well as the CFI/TLI and SRMR values suggesting very good fit, researcher judgment decided against overreliance on the RMSEA and a decision to proceed with the model was made. Table 3.2 presents results of all CFA models.

Table 3.2

Confirmatory Factor Analysis of the PDCS

Models	*N*	χ^2	*df*	RMSEA (90% CI)	CFI	TLI	SRMR	Factor Loadings
Model 1: One-factor CFA	307	90.4***	20	.107 (.085, .130)	.98	.97	.03	.74-.83
Model 2: Male-only sample	168	56.66***	20	.10 (.070, .132)	.98	.98	.04	.74-.84
Model 3: Female-only sample	138	56.07***	20	.112 (.078, .147)	.98	.96	.04	.73-.82
Model 4: 5-or-fewer court visits only sample	236	76.35***	20	.107 (.082, .133)	.98	.98	.03	.72-.86
Model 5: 6-or-more court visits only sample	65	39.73**	20	.114 (.060, .166)	.97	.96	.06	.75-.83

*p< .05; **p< .01; ***p < .001

Further, Table 3.3 shows that the CFA factor loadings were well above the recommended .30 cutoff. The R^2 values of the eight items ranged from (.54 to .69). The Cronbach's alpha for the one-factor PDCS is excellent (α = .90), further indicating that PDCS items hang together.

Table 3.3

PDCS Items and factor loadings

PDCS Item	Factor Loading (SE)
Since the decision to separate, my co-parent and I communicate well.	.82(.02)***
I can negotiate with my co-parent.	.83(.02)***
My co-parent and I can have reasonable conversations on problems concerning our child(ren)	.80(.03)***
My co-parent and I share in some childrearing tasks.	.79(.03)***
My child(ren) benefit from a relationship with my co-parent.	.78(.03)***
I feel satisfied with our agreement on financial matters.	.73(.03)***
My co-parent can adequately for our child(ren)	.78(.03)***
My children and I are safe around my co-parent.	.80(.03)***

*p < .05; **p < .01; ***p < .001

Group Invariance Results

To determine whether the final one-factor model is generalizable across genders and number of court appearances a model option for invariance testing in Mplus 8.2, specifically

model = configural metric scalar, was used (Muthén & Muthén, 2019). The adequacy of the final model was tested separately for males and females, as well as for people who returned to court five-or-fewer or six-or-more times since their divorce filing. All four models indicated adequate fit with the data, and the CFA results for the PDCS for all subsamples are presented in Table 3.2. Results of multi-group CFA are presented in Table 3.4.

Table 3.4

Model Fit statistics for Multigroup CFA of PDCS

Models	RMSEA (90% CI)	CFI	TLI	SRMR	$\Delta\chi^2$ *(df)*	*p*
Gender comparison						
Configural invariance	.108 (.084–.132)	.979	.970	.04		
Weak factorial invariance (metric)	.090 (.067, .111)	.983	.979	.04	4.12(7)	.77
Strong factorial invariance (scalar)	.074 (.052, .096)	.984	.986	.04	12.6(15)	.63
Number of court appearance comparison						
Configural invariance	.098 (.074, .123)	.983	.976	.04		
Weak factorial invariance (metric)	.086 (.062, .109)	.985	.982	.04	6.36(7)	.47
Strong factorial invariance (scalar)	.077 (.056, .098)	.984	.985	.04	23.60(15)	.07

After testing the adequacy of the final model in subgroup samples, the model was tested for configural invariance to examine similarity of factor structure across groups. There was adequate fit for gender (χ^2 = 109.39, *df* = 40, *p* <. 001, RMSEA = .108 [90% CI = .084,.132], CFI = .98) and court appearances (χ^2 = 98.40 *df* = 40, *p* <. 001, RMSEA = .098 [90% CI = .074,.123], CFI = .98). Metric invariance (i.e., weak factorial invariance) was then tested to assess similarity of factor loadings across groups. The fit of the metric invariance models was adequate for gender (χ^2 = 103.83, *df* = 47, *p* <. 001, RMSEA = .09 [90% CI = .067,.114], CFI

= .98) and court appearances (χ^2 = 97.74 *df* = 47, *p* <. 001, RMSEA = .086 [90% CI = .062,.109], CFI = .99).

The gender and court appearance configural invariance models were then compared to their corresponding metric invariance models. Results of chi-square difference tests indicated statistically nonsignificant results, which suggests that males and females have similar factor structures ($\Delta\chi^2$ = 4.12, Δdf = 7, *p* = .77). The court appearance comparison also indicated statistically nonsignificant results, suggesting there is a similar factor structure with parents who have gone to court more or less often since filing for divorce ($\Delta\chi^2$ = 6.36, Δdf = 7, *p* = .47).

Scalar invariance (i.e., strong factorial invariance) was tested to identify whether the item intercepts were similar across gender and number of court appearances. Model fit of the scalar invariance model was adequate for gender (χ^2 = 112.81, *df* = 62, *p* <. 001, RMSEA = .074 [90% CI = .052,.096], CFI = .98) and number of court appearances (χ^2 = 117.70, *df* = 62, *p* <. 001, RMSEA = .077 [90% CI = .056,.098], CFI = .98). Finally, the scalar model was compared with the metric model and found statistically non-significant results for gender ($\Delta\chi^2$ = 12.62, Δdf = 15, *p* = .63) and number of court appearances ($\Delta\chi^2$ = 23.60, Δdf = 15, *p* = .07). Taken together, the results of the group invariance testing indicates that the one-factor PDCS works similarly across genders and number of court appearances.

Discussion

The objective of this study was to assess the construct validity of the PDCS and to examine whether the underlying factor structure (i.e., configural invariance), factor loadings (i.e., metric invariance), and item intercepts (i.e., scalar invariance) are similar for different genders and for court appearances. This study's findings provide empirical support for the use of the PDCS as a one-factor model, despite the RMSEA indicating mediocre fit to the data. The

decision to proceed with a one-factor model was made by considering the factor loadings suggesting a one-factor simple solution, the other fit indices supporting a one-factor model, and also a review of relevant literature pertaining to measurement best practices as well as the theoretical and empirical literature on the underlying construct (Chen et al., 2008).

The study also found that the performance of the PDCS functions similarly for both male- and female-identified parents, as well as those with few or many court appearances. The first test undertaken was configural invariance which exhibited that the factor structure replicated across all subgroups. As this is a one-factor model, this finding means that parents, regardless of gender and court-involvement, attach a similar meaning to the PDCS. With metric invariance testing finding similar strength of the factor loadings across subgroups, parents across subgroups attach similar meaning to the individual items. However, the presence of metric invariance alone does not ensure that parents of similar conflict levels will report the identical scores across the items. To accomplish this analysis, scalar invariance was employed to determine equivalence across the groups of the item intercepts. No group was found to have intercepts that differed.

In summary, results indicate that the meaning of conflict in divorcing parents is at least very similar for both male and female parents, as well as high-court involvement and less-court involvement parents. The invariance finding for gender and for court appearances has significant implications for the use and further testing of the scale as these findings suggest that this scale may work similarly among diverse populations and in different contexts, which is crucial for its use to be adopted by various professionals, including researchers, mental health professionals, and legal professionals. However, further research is needed to establish the consistency of these invariance findings.

Limitations and Future Research

Pertaining to instrument development, the strengths and limitations of this instrument are discussed in further detail in previous articles as it applies to the generation of the item pool from a systematic review, instrument refinement through expert review and pilot testing, and the recruitment process for EFA analysis.

Limitations for the CFA include the use of nonprobability sampling and a non-binary gender sample ($n = 5$) that was too small for tests of measurement invariance. Future research should employ more rigorous research methods, including probability sampling and larger sample size. Further, this CFA is part of an initial and exploratory research project that considers the possibility of a pre-divorce conflict measurement tool. As a result, the number of invariance tests was restricted by the narrow demographic data collected. This study is therefore limited in its ability to suggest that the model would work similarly in different groups not tested here. To further validate the PDCS, researchers should conduct future studies to test invariance across other relevant groupings, such as child-related factors (age, number of children, health of the children), household income, race and ethnicity, and educational level of the parents.

Conclusion

The validation of a pre-divorce conflict scale is an important contribution to family and child welfare intervention research. The absence of a short-standardized pre-divorce interparental conflict assessment tool meant that legal and mental health professionals were unable to quickly and efficiently screen for cases that may result in family dysfunction or child maladjustment post-divorce. This limits these professionals' ability to act preemptively to circumvent these issues and almost ensures that these professionals will become aware of a child/family after the child/family has reached a critical need for intervention. Despite the potential uses for this scale,

it is recommended that further psychometric assessment and validation of the scale take place among diverse populations. This is necessary to ensure accurate measurement and better understanding of interparental conflict for various populations who undergo a divorce.

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DISCUSSION

Summary of the Studies

The research is clear that no one factor, including the actual legal divorce itself, leads to child maladjustment post-divorce (Amato 2001; Lansford, 2009). Instead, successful child and family adjustment must be viewed through a comprehensive framework that includes factors specific to the parents, the child, and context (van der Wal et al., 2019). One of these contextual factors to consider is the degree to which parents are engaged in conflict. This three-paper dissertation offers encouraging evidence supporting a unique assessment tool that would allow legal and mental health practitioners to identify cases that may have the propensity for prolonged conflict early in the divorce process. This dissertation's exploratory nature opens new research possibilities as it begins to address the gaps in our understanding of the role pre-divorce conflict plays in child maladjustment post-divorce. By creating and validating a short instrument to assess pre-divorce conflict, this dissertation offers a new opportunity to identify and intervene with cases with problematic interparental conflict.

Paper 1 from this dissertation is a systematic review that synthesized the literature pertaining to factors that contribute to high conflict in divorcing parents. The findings of this systematic review highlight the difficulty in defining “high conflict” and the still-developing conceptualizations of this construct. The findings also include a synthesis of five prevalent themes in the pre-divorce high conflict literature: conflict resolution/communication, social network, parent characteristics, satisfaction with agreements, and pervasive mistrust. These five

themes influenced the Parents Divorcing Conflict Scale (PDCS) creation, subsequently tested in papers two and three.

The study conducted in Paper 2 describes the development of a self-report measure to assess conflict in parenting couples who are in the process of divorce. Through the systematic review of the literature conducted in Paper 1, an item pool was generated as the beginning of this assessment tool. These items were reviewed by experts in the field of forensic mental health, law, and measurement. After this expert review, the items were reduced to ten items that were pilot tested on nine parents of minor children in the process of divorce. These parents also participated in cognitive interviews, which further influenced instrument refinement. The 10-item PDCS was administered to a sample of 114 divorcing parents, and an exploratory factor analysis was conducted on the collected data. Multiple factor structures were run, and two items were removed from the instrument due to their low commonalities. Factor models were then run on the eight-item PDCS, which confirmed that a one-factor model offered the best fit.

Paper 3 presents a confirmatory factor analysis on the eight-item PDCS, which confirmed a one-factor model having an acceptable fit. Despite a misleading RMSEA figure, a one-factor model was confirmed through a review of the relevant measurement and construct literature, simple solutions, and other fit indices. Paper 3 also conducted invariance testing on two subgroups, gender and court appearances, the results of which suggest the instrument functions uniformly across these groups.

Limitations

Although this dissertation adds important information to the knowledge base for divorce and family studies, there are also some limitations. Notably, this research project occurred during the COVID-19 pandemic, which limited in-person interactions, specifically in obtaining

feedback during instrument development. Also specific to COVID-19, many families may be feeling increased stress which may affect their conflict assessment and responses on the PDCS. Otherwise, the limitations for each individual study are explained in more detail in the respective papers. Still, in the aggregate, this dissertation has limitations pertaining to rigorous research methods throughout all three studies. These limitations result from decisions made based on lack of funding, a research team, and time limitations.

In developing the instrument, this dissertation conducted a systematic review that included only studies printed in English from peer-reviewed journals. Therefore, there is a strong possibility of publication bias, where only studies with a positive finding are published. Further, these articles were all in English at the exclusion of studies reported in other languages that may be influential. Secondly, in developing the PDCS, experts and pilot testers were not selected through rigorous sampling methods but were instead based off of convenience and voluntary response.

Additionally, findings from the quantitative papers should also be viewed with caution. The sampling process in both the EFA and CFA studies is subject to bias as they relied on voluntary responses from a convenience sample. Further, claims regarding the validity of the instrument with various populations are limited. Limited demographic data was collected as part of this exploratory study which influenced invariance testing being conducted on only two subgroups: gender and court appearances. Without further invariance testing on race and/or ethnicity and other relevant subgroups, the instrument's generalizability is limited. A larger research agenda, as described below, is recommended to address these limitations.

Implications for Practice, Policy, and Research

Practice. The PDCS has practice implications for mental health and legal professionals. Mental health providers, including social workers, family therapists, and counselors, working with divorcing families may find it beneficial to assess for conflict and offer strategies to reduce this conflict as a way of helping the family adjust to their new, divorced structure. Similarly, forensic mental health persons, particularly child custody evaluators, may find an assessment on conflict to be informative as they attempt to understand family dynamics and make recommendations to the Court on the child's best interests. Divorce mediators or other arbitrators, such as parent coordinators, may find a conflict assessment tool to be helpful in determining the best ways to structure their practices to support the needs of clients with varying abilities to interact with one another in a non-conflictual way.

Policy. This research's policy implications surround the use of court resources as the legal system is uniquely situated to capitalize on a pre-divorce conflict assessment tool. All couples seeking a divorce in the United States interface with the court at some point. For cases where children are involved, a short screening tool may be provided as part of the initial divorce filing paperwork. This will allow the court to consider divorce cases with a differential approach by identifying cases that might need to be monitored to determine if interventions are needed and what those interventions might be to best protect the child's welfare and reduce the likelihood of burdensome court filings. Furthermore, many states in the United States have mandatory parenting education requirements for divorcing parents of minor children (Salem, Sandler, & Wolchik, 2013). A differential approach to this psychoeducation intervention may allow the creation of parenting education courses that are more tailored to fit the needs of the family based on their conflict rather than a universal course.

Research. An abundance of research on post-divorce conflict already exists, including appropriate interventions designed to reduce this conflict and treatment interventions addressing post-divorce conflict for children, parents, and families (Amato, 2010). The PDCS offers researchers an opportunity to consider intervening more preemptively by identifying cases for intervention early in the divorce process. To facilitate this goal, research is needed to further develop and test the PDCS.

Additional systematic reviews would be helpful in the further development and refinement of the PDCS. For example, a systematic review of interparental conflict measurement tools would help identify conflict dimensions and subscales that other researchers have found important in understanding interparental conflict. Comparing these instruments and dimensions to the PDCS may allow for additional item generation and future instrument testing. Similarly, a systematic review including the larger conflict literature, not specific to divorce, and on conflict in articles not published or not published in English may also identify new relevant conflict dimensions and item generation.

Although, as an 8-item scale, the PDCS is pragmatic for courts, the development of a larger instrument may offer more validity. As discussed, conflict is a complex and multi-dimensional construct and a larger scale with more items to capture these dimensions and with rigorous methods, like reverse scoring, may allow researchers to capture nuances of pre-divorce conflict. Further, from the generation and testing of a larger scale, adaptations of the scale with smaller items can be created, and, if necessary, applied to different contexts. From a larger pre-divorce conflict scale, researchers may also be able to expand on the PDCS to allow for a more nuanced instrument that measures varying levels of conflict pre-divorce (i.e. low to high).

Further testing of the PDCS is also required to confirm this dissertation's findings and continue testing its reliability and validity across different populations. This testing should include using a random and larger sample of participants to test the instrument and collect various demographic data for future invariance testing. Further, of interest would be to determine how various co-parents score on the PDCS and compare their conflict assessments. In this study, whether conflict exists was determined based on a single parent's perception of conflict. It would be worth reviewing how co-parents compare in their perception of conflict and the implications of having differing perceptions.

Including qualitative or mixed-methods research designs would also be beneficial in the further development of the PDCS. Qualitative dyad data would help see how co-parents score on the PDCS compared to their co-parent and then how they experience and understand their interparental conflict. Additionally, qualitative data would help determine the social desirability component of the PDCS and whether that is a factor to consider in administering the PDCS. For instance, do parents want to be perceived as being in high-conflict to justify their decision to divorce or gain access to interventions? Or do some parents want to be perceived as less conflictual to avoid interventions or out of denial? In essence, how heavily should the PDCS be weighed in considering the totality of the circumstances surrounding the parties? To that end, qualitative data from legal and mental health professionals would help determine whether the PDCS meets their needs and what other factors, if any, those professionals consider in labeling a couple as in need of conflict interventions.

Finally, longitudinal studies would also be beneficial in studying the PDCS and its use for practice and policy. For example, the PDCS could be used as a pre-test measure to track the rate in which conflict dissipates from the beginning of a divorce proceeding to several years

post-divorce. It would also be essential to determine if the identification of pre-divorce conflict, and the subsequent interventions (or lack thereof) had an ultimate effect on a child's adjustment post-divorce. The latter can be accomplished by rigorous research methods, including random sampling and random assignment to either an experimental group that employs the PDCS and intervention recommendations with a control group that proceeds through their divorce as normal.

Importantly, the PDCS does not include a child-outcome measure. For any longitudinal studies, it would be important to include a measurement of child adjustment post-divorce. Research may also explore whether child-outcome-related questions should be added to the PDCS.

Conclusively, this dissertation offers encouraging evidence for the need for a short pre-divorce screening tool and for the specific use of the PDCS. However, this dissertation should also be considered the initial steps in a larger research agenda that will further explore the pivotal pre-divorce stage.

Conclusion

Despite the opportunities the pre-divorce stage presents to impact successful adjustment post-divorce, little attention is given to this transitional stage of marriage dissolution. Identifying cases in the pre-divorce stage that may need assistance in successfully transitioning from an in-tact family to a separated family requires assessment tools capable of measuring predictors of post-divorce maladjustment. One such predictor is interparental conflict. However, few instruments exist to measure interparental conflict for divorcing parents. To help fill the gap for a short-validated instrument, the PDCS was developed. Findings from the current study provide evidence of PDCS construct validity; however, future research is needed. Overall, the validation

evidence suggests that the PDCS is a promising addition to the limited number of existing instruments capable of addressing conflict in married parents. Further, it is one of the only short instruments validated for conflict in divorcing parents. Ultimately, a better understanding of pre-divorce conflict will help practitioners, policymakers, and service providers to adequately serve families through the divorce process.

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